Dept. of Agric.

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How to Improve Poor Land.

The Deer Creek Farmers' Club met October 20th at Mr. James Lee's near Thomas' Run. Messrs. Moores, Lochary and Rogers were appointed a committee to examine and report upon the condition of Mr. Lee's farm and stock. Their report was complimentary in every respect. Mr. Lee's farm consists of 216 acres of highly improved land, and being chiefly a grazing farm, 150 acres are in grass. Part of this is permanent pasture and has not been plowed for forty years. Mr. Lee lately sold a lot of fat cattle, some of which were shipped to Europe. The committee regarded this as a compliment to Harford county grazers, since a few years ago Harford could not raise corn enough to feed her people. Mr. James Lee has 80 head of stock cattle which are the finest ever seen in Harford county. He has a number of registered Short Horns and a pen of choice Berkshire swine. Mr. Lee raised 960 bushels of wheat on 30 acres. He also farmed 200 acres of land in the neighborhood, his entire wheat crop on 68 acres being 1,927 bushels, or over 28 bushels per acre. Mr. Moores, of the committee, said if he had the making of a farm he would make one like Mr. Lee's. Mr. Wm. Webster felt proud that there is such a farm in Harford county, and regarded it as a model,

The subject discussed was "The best rotation of crops to improve poor land," and our friend of the *Aegis* gives the following report:

James Lee.—The trouble with poor land is the lack of vegetable matter. You must get that in the land in some way. In taking up poor land he would first plow it in the spring, sow buckwheat or early peas, turn them in late in the summer or in the fall and sow wheat. If his bank account could stand it he would fertilize heavily and try to get a stand of clover. When you get land to growing clover there is not much trouble to improve it. He would pasture the clover the first year, after it comes in bloom. Leave it on the ground two years and then plow it again for wheat, returning the straw immediately to the ground. As soon as the land would grow corn he would plant it, get stock to eat and tramp up the rough feed, returning the manure to the ground. His rotation would then be corn, wheat two years, clover, wheat and grass, leaving it in sod a length of time, for pasture. In applying fertilizers would prefer to use them on wheat, plowing early; sow bone immediately, broadcast, striking it in lightly with a harrow. He would apply barn yard manure to sod. For wheat it makes too much straw, throwing the wheat down and killing the grass.

Wm. T. Sawyer thought the best way would be to cultivate something that would be available for plant food and get the land in clover. Would apply bone early in the season and make a growth of clover, even if not strong. Clover will grow on thin land, but heavy, clammy soils do not suit it well. His rotation is corn, two crops of wheat, followed by grass. He plows wheat stubble to get it in good condition. Let the grass remain if he can four or five years, mowing the first year. Pasturing may set the grass better.

Geo. E. Silver said the best rotation he knew of to make poor land fertile is barn-yard manure and bone dust. But the cost must be considered and farmers like to make the ground pay its way while improving it. We are limited, to a certain extent, as to rotation of crops, to corn, wheat, hay and grass. Clover is a great help to the soil and on heavy clay soil it is cheaper than artificial manures. It is necessary to put the land in some crop and that depends on the ability to apply manure. His rotation would be corn, wheat, clover. Let the clover stand two years, top dress with plaster and put in the wheat. Follow with grass. Mow it one or two years, then pasture, occasionally top dressing. In this way the land can be brought to a good state of cultivation in a few years, and kept so.

Judge Watters said he did not attach the same importance that many persons do to a systematic rotation of crops. We should manage lands so as to have it always in some paying crop and plow to keep it in that condition. To make land rich we must use barn yard manure and bone dust to supply mineral manures and organic matter. If he had a poor land to improve he would first get it in condition to raise clover, then apply a quick fertilizer, raise a crop of wheat and start grass to growing. He could sow clover, and when that was set would sow bone dust on it, letting it rest until nature dissolved the bone dust. It would then be ready to raise wheat or corn. By occasionally plowing down a crop of grass you supply organic matter and improve the soil. In using raw bone theory and practice both point to putting it on grass and let it lay a year. Better results are obtained in this than in any other way. The rotation must be varied according to circumstances. A grass set may fail and the field have to be plowed out of its order.

John Moores believed that the system generally adopted here by farmers is the best, that is corn, wheat followed by the wheat again and grass. But with a poor farm and a poor farmer the best rotation is a puzzle. With a sedge field farm he would first sow buckwheat, put the land in wheat the same fall, followed by wheat the next year. Then sow in timothy, but the latter is not improving to land.

Parker H. Lee said when he first took the farm on which he lives the land was very thin and nearly all in commons. He began with good plowing, and depended on clover and pasture to improve it until lime came into use. Any Deer Creek land will improve by proper farming and keeping grass on it. If he intended to make a poor farm improve itself he would sow no grass but clover. Would mow the clover the first and pasture with sheep the second year. Then plow the clover under for corn, and follow with wheat and clover.

R. John Rogers said that in taking up poor land he would like to get it in clover as soon as possible. The surest way to set clover is with oats. After sowing the oats sow the clover, giving the ground a brush with a harrow, and you will be pretty sure to get a set. Use some fertilizer, even for oats. With a good crop of clover as a starting point follow with wheat and clover again. There is a poor chance for corn on poor land, but wheat is more certain. With a free use of clover the land will improve. He had never found it possible to follow up a strict rotation of crops. He asked if any one had found plowing buckwheat under beneficial.

Thos. A. Hays said the best crop of wheat he ever raised was by plowing in buckwheat. Last year he sowed 4 acres of corn ground with peas, using some fertilizers. They made a rank growth which he plowed under and had an increased crop. The Gale is the only plow that will turn under pea vines. Roll the ground and drill it, but don't harrow it. Get the land in clover as soon as possible, and keep it in clover as long as you can.

Wm. Munnikhuysen would try to get some kind of grass growing first and then use Oriole phosphate on wheat, following with clover.

Thomas Lochary said that in bringing up poor lands he would try to keep in clover as much as possible. He was not as much in favor of making ground rich by resting it as he used to be. After land is in clover two years follow with corn and wheat, sowing clover next spring. He has clover growing three years out of four, and a crop of wheat and corn every four years. Keep a little stock in summer and as much in winter as possible. Haul out the manure as soon as you can.

Wm. D. Lee said if he had a poor farm and no outside means he would run off and let somebody else improve it. Clover and commercial fertilizers should be used to begin with.

Edward P. Moores said his rotation would be corn, followed by wheat two years in succession, then sow clover. Fertilize the corn and wheat as heavily as you can. Mow the clover the first year and pasture the second. If he wanted to plow he would try to put on a covering of stable manure first.

E. M. Allen said he never saw a crop of green clover plowed under fail to bring a good crop of wheat. Clover is a good fertilizer and is not used enough.

John Moores said $10 worth of bone dust would improve the land more than a ton of clover, which might be sold for $10. The worst crop of wheat he ever had was from plowing under green clover.

R. Harris Archer agreed with Mr. Moores in regard to plowing under green clover. If apply a half a ton of bone dust to a sedge field it will bring it up at once, but it is easier to make poor land good than to make good land rich.

Wm. F. Hays had tried to improve poor land by several plans. He had sowed buckwheat, cutting it off and plowing it down, following with wheat. He had also broken up lands in the fall, summer fallowed it, sowed wheat the next fall and grass seed on the wheat. He applied 400 lbs. of bone dust and 60 lbs. of Peruvian Guano.

Mr. Webster regarded clover as the basis of improvement to all the old farms of the country. He did not see why a farmer could not follow a rotation, and could judge from experience what crops would best aid in improving the land. He referred to lands in the Forest that had been made rich by putting the manure in one place, and claimed that any land could be made rich.

Bennett H. Barnes said his experience with timothy hay differed so much from that of other members that he hesitated to express it. He had cleared a woods, ten years ago, plowed in the fall, the next spring planted it in corn, followed by buckwheat and bone. No fertilizer has been used on it but bone. Cloverseed has been sowed with timothy and never missed a crop. He believed land might be improved by cutting timothy. Pure bone will improve land without stable manure, but it is better to use stable manure with it.

S. B. Silver, the president, said he thought it a good plan to plow down green crops. If he had a piece of poor land he would get it in clover. Pasturing sheep on it would bring it up quicker and at less expense than anything else. When the clover is gone better grass would take its place.

Adjourned to meet at S. B. S.'s, Geo. E. Silver's, November 10th.

Technical Education for Farmers—II.

A farmer needs special education in soils, their capacity for different crops, and the best manure for each kind. He needs it to show which kind of grain or grass these different soils will produce in the largest quantity at the least expense and which are best suited to the climate of the particular section. Then he wants to know what particular breed of horses, cattle, sheep or hogs can be most advantageously fed on these crops. And in addition, he wants to know the most economical and best combination of them to produce the highest yield in a given time.

Some combinations of food produce the most flesh; some the most muscle, and others develop the bone. Again, some foods may be considered stimulants, inducing early growth. Others are equally potent but do not act so quickly.

The use of these different foods is obvious. Slow growing breeds require the one; those of quick growth the other.

Again, the race-horse requires muscle, bone, wind. The coach-horse wind, bone, weight; the farm-horse weight, bone, less of activity. One food will not do the best for them all.

In cattle the same rule holds equally good. To raise beef cattle, workers or dairy ones, the same foods in the same quantities or of the same kinds will not answer.

Heavy feeders, such as the beef cattle are, require rich pastures of good grass; the workers demand stronger and more concentrated food, while the dairy ones require the choicest quality of both.

The chemist can tell the best kind of food for these purposes, but the zoologist the breed which responds best to them

These facts point to a technical education in these branches as modified by soil, climate and productions.

If, as seems to be a fact, four-fifths of the grain of the union is produced on farms owned by the producer, and at least eighty-five per cent. on farms of one hundred acres or more, it becomes self evident that if their children are ever educated in the profession of their fathers the course of instruction must be short, concise and practical. All branches not absolutely essential must be excluded.

In looking over the studies of our so-called agricultural colleges, one is struck by the length of their courses; a majority of them taking 4 years, many 8 years and a very few two years.

One is still further struck with the amount of useless studies thrust into their curricula: French, German, Spanish, English literature, history, navigation, rhetoric, logic, declamation, vocal culture, algebra, geometry, plain and spherical trigonometry, mensuration, conic sections, differential and integral calculus, analytical geometry, practical astronomy, mental and moral philosophy, constitutional law, political economy, civil engineering, mineralogy, geology, metallurgy, mines and mining, shades and shadows, perspective, drawing and perhaps other branches. One institution requires its pupils at entrance to pass on "algebra, geometry, plain trigonometry, arithmetic, mensuration, industrial drawing, geography, elements of botany, zoology, chemistry, physics and general history."

Now it is self-evident that a system of instruction, so wide and so long, cannot be availed of by farmer's children either now or in the near future, much as it may be desired by them. Time and money are both needed. Every one knows how few of the community now get collegiate education. The wealth does not exist to give it. But the farmers are the mass of the population, and upon their integrity and their education hang the destinies of the nation. In the maddening race for wealth and social distinction, they must win or perish. Their schools must be adapted to their needs, and their pockets. They must be directed, arranged and controlled by those whose thorough acquaintance with farmers and farm-life will impel to newer and better methods of instruction. Theology, medicine and law take two years. There is no reason why all that the agriculturist really needs cannot be taught in one year or less. Oral instruction now pervades primary and normal schools, it is forcing its way into our higher colleges and universities. Casts, models, drawings, preparations of various kinds, the photograph aiding the hand, the eye and the microscope, all shorten the process of education. They are used everywhere but in colleges devoted to agriculture.

The truth is most of these institutions are presided over by college graduates who cannot lay aside the old methods there used, and who think the old way the best. They may aptly be compared to the man who prefers the sickle, self-binding, the flail, and an old-fashioned fan, to secure his wheat crop, to the reaper, hand-binder, steam-run thresher and cleaner of the present day, or to him who prefers to go to church on horseback with a child or two before him, while his wife, on a pillion behind, takes a few more, to the comfortable and inexpensive daytons of the present.

We want more of the practical, less theory; more acts, less words; in short a severe boiling down of the whole system of education to meet the imperative wants of farmers. Text-books there are in abundance which contain much that a farmer should know, but they lack brevity and conciseness. The hog-cholera and that of chickens here, the vine pest of France, the potato-rot of Europe, are all terrible lessons of want of knowledge on the part of farmers. Technical education, giving better habits of observation, would have deprived them of their terrors long ago.

Let us hope that the day is not far distant when an improved system of technical education will place farmers in their true position as the thinking, conservative element of community.

With technical education widely diffused we should have larger crops, better breeds of stock, raised at less expense, more surplus to dispose of, hence more means, more time, and then a wider reaching and more extended education for the sons and daughters of the soil. This thorough mastery of the great underlying principles of agriculture would give confidence, and most of all, self-respect. It would lead to careful observation and earnest study. It would beget a taste for reading and independent experiment. The agricultural papers would no longer be the vehicle of the crude ideas of the mere theorist, but of the practical experimenter. More is frequently learned by failure than by success. Successful military men ponder carefully the successes as well as the failures of chiefs in the art of war. Farmers need the same kind of record to study. All are too apt to overestimate the result of a single experiment to note and weigh correctly how much the special temperature and rain-fall of the season influenced the result. It may have been the whole of it. The late Prof. Henry, of the Smithsonian Institute, pointed out years ago, in reference to the effect of the moon on the weather, that we recollect much more clearly and exactly at all times our hits than our misses. We cling with great tenacity to a single success; we abandon a failure at once, without studying the collateral circumstances which produced it, and without reflecting that a life-time might not see such another combination of them. But this study involves winds, temperature, rain-fall, which cannot be estimated properly without thermometer, barometer, hygrometer and rain-gauge; instruments unknown to, and unused by the mass of farmers. They need the technical education which teaches that through their intelligent use success is achieved. They need the mathematical precision of the great French cook, Soyer, who prepared his tempting viands, thermometer and scales in hand. In short they need a good technical education to achieve success and to avoid failure.

Russum, Md. A. E. A.

Agricultural Matters Abroad.

(From our Correspondent in Paris.)

THE REARING OF CALVES FOR THE BUTCHER constitutes an important industry in France. Strange, while French farmers give only a secondary consideration to the selection of parents in the breeding of horses, they seem to be convinced of the importance of such being good in the case of cattle. They have found out, that inferior stock does not pay; such require more feeding and a longer time to arrive at maturity, while commanding a lower price, the flesh being less esteemed. If the calf be destined for reproduction, very great attention is given to its rearing, more particularly if it be a bull; then pure milk, and never substitutes, is given, and as much as it can take; suckling is encouraged as essential to development, and as the mother's supply may be falling short as the calf increases in age, a second and even a third cow is pressed into the service. Where the bull promises to be a very choice animal, it is allowed to suckle till seven months old, and even longer. Then it receives the most succulent food in season. Under all circumstances feed young stock generously; stinting in food means stinting in growth. It should ever be kept in mind not to over-feed young bulls, as having too much flesh diminishes their powers of reproduction.

After calving, the mother is covered with a rug, and left undisturbed for two or three hours, at the expiration of which, she receives a white drink of meal or bran. In some localities where the parturition has been fatiguing, two or three quarts of warmed wine are given. In the neighborhood of Lyons, every cow on calving receives four to five quarts of wine and one pound of toasted bread, and this ration is frequently repeated two or three times in twenty-four hours. Professor Grognier lays down, that a cow under such circumstances can take fifteen quarts of wine a day without any injurious effects. Until the twelth day after calving, the cow is kept on a light diet.

If a cow refuses to lick the calf when dropped, salt and crumbs of bread are dusted over it and then presented to the mother. Calves destined for the market are generally fed the first six weeks on unskimmed milk, if artificially reared. There are districts in France where calves intended for breeding or work, are never allowed to suckle; from the earliest moment they are induced to drink from the pail into which the milking has just been made. This process allows the milk of several cows to be utilized, of the employment of warmed skim milk, of cake, meals and hay-tea. If diarrhœa in a light form appears, barley water often stops it.

From two to three months is the usual time allowed for fattening calves. In Flanders, the milk is given three times a day, commencing with one quart, and ending with seven quarts per meal. Eggs are in many cases added and the soft part of bread crumbled. The eggs, given morning and evening, are broken up shells and all; they are reputed to keep away acidity of the stomach, perhaps by the lime of the shells; they facilitate digestion, and ward off diarrhœa, so frequent an accompaniment when meal or flour diet is much patronized. Butchers maintain, eggs enhance the quality of the flesh, diminishing at same time its redness. In the Beance, farmers add boiled ground or whole rice.

In Flanders and the north of France, calves are fattened in narrow cribs, just like geese at Strasburg; these pens are two feet wide and five deep, and are portable. The litter is never removed, but renewed as required. Decoctions of poppy heads are added to the milk to induce the animal to sleep. At Dens, in Germany, M. Leyfarth gave his calves skim milk, and to represent the cream, three ounces daily, at rate of one ounce per repast of beef or mutton suet, lard, or turnip-seed oil; at the end of the fourth week the grease was reduced by one-half and replaced by cake and meal, and the veal was found to be as good as that produced from pure milk.

Calves, fattened under the most favorable conditions, do not represent more than two sous per quart for the milk worked up. That industry does not pay near towns, or where butter and cheese-making, with pig-fattening on the whey, etc., can be successfully practiced. It is an error to conclude that calves will increase in weight proportionate to their feeding. Thus, at its birth, a Durham calf weighs 70 lbs., while a Schwitz calf—a race of cattle peculiar to that Swiss canton, the Tyroe, Bavaria, and at the east of France, will weigh 100 lbs. Yet the Durham speedily surpasses its rival, by its precocity.

Calves increase in weight daily, from the first to the eighteenth day, 42 ounces; from the 19th to the 25th day, 49 ounces; and from the 25th to the 35th day, 34 ounces. According to Broussingault, the average daily augmentation in weight is 38 ounces per 9 to 11 quarts of milk. Male put up about four ounces per day more flesh than female calves, but in any case the animal belonging to the most improved breed will mature the quickest. The parts of the body of the animal which develop most during the first six months, that is, during the milk-feeding stage, are the chest and loins; the shape and the interior parts come next.

In weaning calves, hay-tea enters largely as a substitute for milk; then linseed-cake gruel, in Russia beer, is largely mixed with the milk, that which explains the enormous size of the calves. Two pounds of hay are steeped in nine quarts of warm water and five quarts of the tea are estimated as equal to one quart of milk.

In France, the preference is given to rearing calves in the air, instead of the house; the assimilation of the food is better effected. Cake is considered to be efficacious against black-leg, but it must form part of the permanent rations; in Nevergne, diarrhœa is cured by the yolks of eggs and red wine; in Russia and Germany, a few spoonsful of rennet effects wonders; in Belgium, calves are allowed to lick a lump of chalk, as sheep and cattle are rock salt; strong purgatives are rarely resorted to. However, in the Beance, where so much veal is reared, from two to two-and-a half ounces of soluble cream of tartar, dissolved in four quarts of water and colored with honey, is a favorite receipt; administer the drink every hour, pending twelve to fifteen hours; if colic appears, add a little opium to the mixture.

The Ensilage of green fodder being now an accepted fact and utility, the question is being discussed, is it possible, by the addition of other matters, to augment the nutritive value of the maize so as to raise it to an equality with good hay. The latter, for example, represents one part of azotized to five of non-azotized matter, while for maize, the proportion is one to eight. In a word, ought we convert the silos into a kind of laboratory for the preparation of rations fermenting in common and rich, according as they may be specially destined, for milch cows, oxen and horses employed in labor, or cattle tied up for the butcher?

Maize, that type of ensilage-forage, contains 80 per cent. of water; it is suggested that the addition of dry substances as wheaten or other chaff, rape-pods, etc., would in absorbing part of this high percentage of humidity, become enriched with azote. Others advocate the addition of oil cakes, aftermath clovers, so difficult to secure in autumn. Experience so far shows that it is better to mix the cake and chaff with the preserved maize, taken out for feeding, some twelve hours before serving to the stock; the slight fermentation of the mixture will be the more relished. Aftermath is suitable for mixing in the trench with maize; but it must not touch the walls of the silo or trench, but be kept in the centre, well shaken out, so as to lie not in wisps or lumps, but layers. Beet-pulp and distillery grains, have been mixed in the silo with maize advantageously. Except in the case of maize a little damaged or very wet, salt is unnecessary, but if added, 1¼ lbs. to the ton of green stuff will be sufficient.

"Jerseyman's" Farming.

Messrs. Editors American Farmer:

Being a reader of your paper and seeing your request as to the "Jerseyman's" views of farming as an occupation, I endeavor to point out from a short experience a few errors of our friend. We, as farmers, agree that we learn as much from errors which are failures or a source of the same, as from our successes.

In the first place, our friend has failed to give the distance of his market upon which his profit and success greatly depend. Then he wished to be relieved of labor and worriment of mind. He has selected such things as are apt to worry a man's mind and body too at times. In my estimation he would not be a farmer, a dairyman, or a small-fruit grower; he would have just about enough of one to cripple the other. The small fruit

and dairy require a near market, or such advantages as would amount to the same. They also require constant care, for it is the eye of the owner that fatteneth the ox. According to his plan there is no pasture for stock, nor any growing corn, both of which are very necessary on a farm. Then the potato crop requires too much labor for our friend. To make a long story short, he has divided his farm badly; he re-seeds no grass land; has averaged his crops, some far too low and some too high in yield and price. Also his hire is insufficient according to his arrangement of affairs.

My idea of farming a farm of 100 acres (supposed to have plenty of timber land not included) only for an occupation and not for profit, beyond supporting my family and running the farm, is as follows: I would divide it in six fields of fifteen acres each, leaving ten acres for garden, orchard, etc. Fields to be worked on this scale, with improvement of land always in view. Field No. 1, old pasture planted to corn; No. 2, pasture; No. 3, to mow second time; No. 4, to mow first time; No. 5, wheat; No. 6, potatoes, experimental plot and truck for family, with a surplus for sale to help to bear current expenses; would keep four horses, one of which for driving, also to work at busy times; two cows to supply family with milk and butter. A few stock cattle, five hogs for pork, one brood sow and poultry. Also would use all machinery that could be practically used.

SUBSCRIBER.

Montgomery Co., Md., Oct. 26th, 1883.

For ourselves, we would say to our correspondent "Jerseyman" that farming occupies pretty much the same position as other trades and professions. Because a man is successful as a blacksmith or a broker, it does not follow that he will succeed as a farmer, any more than a successful farmer would succeed as a blacksmith or as a broker. One amateur says, "I have seen a great deal of farming done, and am sure I know all about it." So the farmer might say that he had seen the blacksmith work so often, he is sure he knows all about it. But when each takes the other's tools he finds that it takes something besides "*seeing*" to make a blacksmith or farmer. But, says one, "I do not propose to handle the plow myself; I can employ the labor of those raised to the business, while I superintend." So also might the farmer hire blacksmiths and superintend the shops, but each would soon find that a little "*know how*" would add greatly to their success. Success in any business depends largely upon the man. Many men in other professions make capital farmers, as many farmers would make first-class merchants. The trouble with most inexperienced men who figure about the possibilities of farming is that they take for granted that *their* farming and management will be much better than that of the most skillful of the men who have been farming all their lives, and they start out to be model farmers, without having learned the alphabet of the profession. Just as well might one set up for a first class joiner who had never learned to handle a rip-saw. But to the man who has, like our correspondent "Jerseyman," been learning the alphabet of farming on a small piece of land and has a genuine love for farming, and has means enough to tide over the "ifs" and "buts" of a few years "in the advanced class," farming offers the happiest and best life left on this earth. He may not average two tons of hay per acre, and may often have to sell what he has for less than his estimated price, but if he is out of debt he is clear of all torments which assail the city man. He need care nothing for the "bears" among the Wall-street stock, so long as there are none to break in among his flocks, and the only "bulls" that need worry him are Jerseys or other thoroughbreds, which are less dangerous than the Wall-street breed.

Such a man, with the capital "Jerseyman" names, ought to succeed, just as a man with like capital would succeed in any occupation to which he was adapted; no more, no less. In regard to "Jerseyman's" estimates: For this latitude, except on certain soils, his estimate of the average potato crop is probably too large, though it is sometimes doubled. But he has offset this by naming a price lower than the crop usually brings in our market. Experience shows that it takes remarkably good land to bring two tons of timothy hay per acre in fairly good seasons; he had better take a ton and a half or even less as an average even on land worth $150 per acre. In regard to "ensilage," "*festina lente*" is a good motto, and practical men are not yet unanimous as to the profit of the practice. On the whole, though the "ifs" and "buts" don't figure much in his estimates, "Jerseyman's" final balance is very reasonable, and ought to be made or even largely exceeded by a practical farmer on such a farm. But is it possible that "Jerseyman" don't mean to raise any Indian corn or wheat? And does he really propose to cultivate fifteen acres in small fruits with the labor of two men besides cultivating his other crops? "Jerseyman's" figures might be gone over and a better piece of farming be done on paper; but "all's well that ends well," and as he has filled in the gaps on one side his ledger with over-estimates on the other, we can only say that with such a farm of No. 1 land and money to pay for Jerseys, and to build silos, he ought to succeed a great deal better than his balance sheet says.

EDS.

Baltimore County Clubs.

The October meeting of the Gunpowder Agricultural Club was held at Mr. Edward Austen's, near Glencoe. All the members but one were present, with a number of guests. Mr. John Crowther, Jr., was foreman, and with an inspection committee, the club viewed and admired the many substantial and convenient buildings and late improvements, also the valuable stock, especially the Jerseys, which are highly prized by Mr. Austen. His thirty or more Shropshire sheep are beauties. The Cooley creamery attracted attention and its advantages. The new house now occupied by Mr. Conn, which was built according to Mr. Austen's design, was well worthy of notice, and received deserving praise. The crops were good and much land lies in grass, one hundred acres of which will be cut next year. Sixty acres of wheat and fifteen of rye have been sown. Another outbuilding, 80 feet long, will be erected. After the inspection, the club assembled in Mr. Austen's residence, on the Fillston property. It is a handsome building and cannot be excelled in any respect by any in the county or State. A large and beautiful velvet like lawn with a perfect symmetrical hedge surrounds the dwelling. Everything about the premises reflect the greatest attention to beauty, neatness, convenience, health and happiness. Questions on the planting and success of potato growing were asked. Mr. John Crowther was the most successful, he having grown at the rate of 300 bushels to the acre. Hog cholera and other subjects were presented. The annual manure question, with any new experience in making, applying of the same, was the prominent subject of the evening. The club will meet next month at Mr. B. McLean Hardesty's, when the subject, "How to perpetuate our meadows," will be discussed.

The Junior Gunpowder Club met on the 20th inst., at Mr. William Brooks'. Mr. Chas. Price was foreman, and Mr. Granville Matthews, secretary. The principal question of the evening was "How should a young man, with $3,000, on beginning farm life, best apply it?" It brought forth many replies of interest. Mr. Samuel M. Price, a delegate from the Senior Club, was present, and having visited the late Hagerstown Fair, said it was the best fair he ever attended. He was much pleased with everything, except being crowded out of accommodations, he being required, unexpectedly, on account of the numerous visitors, to return homeward. Mr. Brooks has less than 100 acres and it is being much improved. The next meeting of the club will be at the residence of Mr. Edwin Scott, Jr.—*Baltimore County Union.*

Applying Manure on the Surface.

No loss of importance occurs by escape of gases from manure lying on the surface of meadows or plowed ground. The manure may be spread on the land as soon as made, fresh from the stables, without losing any sensible portion of ammonia by evaporation. Manure from the yard or stables rarely contains such an amount of volatile fertilizing matter as should deter from spreading it broadcast on the surface when most convenient. Unless manure is very rich, as from grain-fed animals, and is in an active state of fermentation, hot and smoking, and exhales a distinct smell of hartshorn, there can be no loss from exposure, and in any case the loss will be less by spreading it over thinly than by dropping it in small heaps, because spreading means cooling and loss of fermentation. But manure, when properly handled, need not suffer any waste from evaporation. A moderate and regulated heating of fresh manure results in the formation of humic acid, which secures the ammonia from loss by evaporation. Surface manuring is especially effective on sandy soils, and a light dressing yearly is far more beneficial than heavy coatings once in three or four years. But the best results on sandy soils is when they are dressed with a compost of manure and clayey muck.—*Rural World.*

A Significant Exhibit.

At the State Fair in Rochester, N. Y., was a very notable and unusual exhibit, from Geneva, made by the State Agricultural Experiment Station. On plates side by side were shown ninety varieties of potatoes, each plate containing the entire product, large and small, sound or diseased, of a hill grown from a single eye, all planted on the same plot of ground, cut, planted, cultivated and in every way treated exactly alike. It was designed to, and did, show conclusively the productiveness and healthfulness as well as the market value of the several kinds, under similar conditions. While some varieties only produced one or two little worthless tubers, others yielded all the way to six or seven large, smooth, fine potatoes; while some, while producing sufficient quantity, were nearly all small and unmarketable, others were all of a uniform and fine size; while some were entirely healthy, others were badly diseased, and some entirely worthless. It showed some loudly praised varieties that had been sold at high prices in their true light as great frauds.

If all varieties were to pass through a similar trial before being offered for sale to the public, many thousands of hard-earned dollars would be saved, and much valuable time now wasted in testing inferior kinds. Such a course might be bad for the originators and pushers of new sorts; it would be a great advantage to the general public. This exhibit attracted great attention and was carefully studied by thousands of the intelligent and careful farmers in attendance, and could not fail to be of great use as an object lesson to the potato grower.

Dr. Sturtevant, the Director of the Station, and his attendants, were on hand and tireless in their efforts to have all clearly understand the lesson, and they are entitled to much praise for having made this very instructive display. I hope they may hereafter not omit a similar display at each recurring State Fair, as these alone would be of more value to the New York farmers, than the entire cost of sustaining the station.—*Ex.*

The Soja Bean.

A correspondent of the New York *Times*, whose experience agrees entirely with our own, relates it as follows concerning this "novelty" of the seedsmen:

"This bean (pronounced soya) is an East Indian leguminous plant, in habit much like the English field bean. It is very rich in legumin or vegetable albumen, and is used to make a substance like cheese and used for cheese by the Chinese. It is also the basis of a highly flavored sauce known as soy. Thus it has its uses, but as a fodder plant in this country it is not a success. It has been puffed to some extent for this purpose, but it may be classed among all the other numerous failures, as prickly comfrey, teosinte, pearl millet, and half a score of other frauds. There is nothing like corn, field corn or sweet corn, for a fodder crop. For instance, I sowed half a pint of soja beans on ten square rods of ground on the 15th of May, and on the same day planted just as many rows of evergreen sweet corn. The sweet corn has kept the house supplied with cooking ears; I have from this small plot a bushel of seed and half a ton of stalks, which made the best of fodder. The soja beans are not yet in blossom, are three feet tall, and about one-quarter of an inch thick, and would make in all about 100 pounds of dry fodder. No more soja beans in mine, if you please."

Proceeds of the Cotton Crop.

The largest amount of money ever realized from a year's cotton crop, was realized in 1875-6. This amount was $399,000,000. The number of bales was 4,600,000. Last year a crop of 6,900,000 brought $327,000,000. Though in excess of the crop of '75-6 by 2,300,000, it brought $72,000,000 less money. In 1880-1 a crop 600,000,000 bales brought $336,000,000 or $9,000,000 in excess of last year, though there was 300,000 fewer bales of cotton sold. In 1879 a crop of less than 4,000,000 bales brougnt more money than a crop of virtually 7,000,000 brought last year.

Live Stock.

Association of Effort in Promoting Improved Stock Breeding.

Prof. F. A. Gulley, in the *Southern Live Stock Journal*, says: From 1865 to 1870, $500 would have bought the best Jersey cow in the country and considerable less would have taken the best bull. We now have a number for which $10,000 would be refused. But a few years ago most farmers would have scorned the idea of using a Jersey bull to grow dairy stock, and Holsteins, Herefords and the black muleys that now sell for hundreds and thousands per head, would have gone begging a long time for a hundred dollars or less.

Why have they become popular? And we answer again because they have first, merit, and second, their merits have been laid before the people and a demand created by making certain men understand that it would be to their interest to improve their stock or become professional breeders. The "big ox show" started about 83 years since by the Collings, is still kept up and has, perhaps, done more than any other one thing to improve the stock of the country. Not one of the prominent breeds of cattle in the country but has sufficient valuable qualities to make it profitable to breed in any State, if the breeders will organize and work together, and make the merits of their animals known. The greater the number of improved cattle in a State, of one breed, the better opportunity there is for all owners of other breeds to sell stock, if they have good stock, by advertising.

Ten head of Shorthorns, Devons or Holsteins can be sold in Mississippi, to-day,

where one would "hang fire" if the Jersey men had not worked up the "stock fever." The more competition the greater the demand for all.

The man who stops to complain that another is doing him an injury by introducing and working up an interest in some other breed, is simply wasting time that should be employed in making people believe that he already has what they need. The association and combined effort of the Holstein importers and breeders with the most extensive advertising through the papers and by exhibitions, has led to a careful inspection of the merits of the breed by thousands of men who would have neither known nor cared for this popular breed had not their attention been thus called to it. The merchant who is not a large advertiser carries on but a small business, no matter how good and cheap his wares.

A breed of cattle possessing the good qualities of all known breeds, would not become popular without advertising.

Contagious Diseases Among Domestic Stock.

A convention of representatives of all classes interested in the animal industries of the United States will be held in Chicago, Thursday and Friday, November 15, 16, 1883, for conference concerning contagious diseases among our domestic animals.

In addition to addresses and reports, the following topics are proposed for discussion:

1. The extent to which contagious diseases exist among domestic animals in this country.

2. The modes by which they are introduced or disseminated.

3. Methods by which they may be eradicated, or infected districts be isolated.

4. The efficiency of existing legislation relative to such diseases.

It is desired that this convention may be national and thoroughly representative in its character. The time and place have been selected for the convenience of the large number of those directly interested in the questions to be discussed, who are expected to be in attendance at the Annual Fat Stock Show under the auspices of the Illinois State Board of Agriculture, and meetings of a number of important live stock associations to be held during the continuance of this show.

Agricultural, live stock and dairy associations are invited by the U. S. Commissioners of Agriculture to send representatives, and all persons interested in breeding, rearing, transporting, importing, or exporting any class of farm animals will be welcomed to the convention.

Reflections on Heavy Fleeces, and Suggestions for Improvement.

My attention was lately called to the abundant enthusiasm of a writer over the very great improvement made in sheep in the past fifty years, and citing as instances the weight of fleeces produced the past season. A Michigan sheep had shorn a fleece of over 41 pounds; a New York one, 40 pounds; a yearling, 32 pounds; and a ewe, one weighing nearly 27 pounds, and the writer urged every one to try and produce "such wonderful fleeces." I wonder if he did not know that fully seven-eighs of the very heavy fleeces are only grease, yolk and dirt, and two of these, grease and yolk, are produced at great expense to the vitality of the sheep; that it takes as much feed to produce four pounds of these utterly worthless products as one pound of the finest wool, or two pounds of meat, and knowing this fact, that he did not frankly say so in this article, I wonder how long the craze for wrinkles, grease and yolk will continue before some man will show sufficient independence, enterprise and practical utility to strike out in a new departure and try what can be done in breeding sheep, first for grease, secondly for wool, and thirdly for meat.

Of course I am aware that a certain quantity of grease and yolk are necessary for the best good of the wool sheep, to keep the wool in the finest condition, and to protect the sheep from the vicissitudes of the weather; but that six or seven pounds of these to the pound of wool are not necessary, is clearly proven by other breeds of sheep, and it is the absurdest kind of nonsense to extol such sheep as produce so large a proportion of these, and urge people to breed them. I fully believe it is possible and very practicable to produce a staple longer, finer and stronger than any Merino wool now grown, and in twice the weight of pure wool to the fleece, and yet not to have it as now, so utterly buried in such a large proportion of grease and yolk that must all be cleaned out and wasted. It is folly to waste so much of the energies of the sheep in producing such worthless products, and great efforts should be made to change the fashion—for sheep breeding is largely a matter of fashion. The Sheep Breeders' Association and State Agricultural Societies owe it themselves and the people to effect this change, and ought, by discrimination in prizes, to encourage the production of more wool and less grease; yet what is the fact? I have examined a large number of premium lists, and they all offer liberal premiums for "fineness of fleece," length of staple," and for "weight of fleece," but not one of them for a largest proportion of cleansed wool to fleece produced.

This is all wrong. Where $20 is offered as the ordinary premium, at least $100 should be offered for the ram or ewes producing the largest amount of cleansed fine wool having the greatest length of staple and fineness of fibre. Such a premium as this, together with the honor of producing such a sheep, would exert a powerful influence, and I am confident would show immediate and good results. I am proud of what American breeders have accomplished in the past fifty years, and there has certainly been great improvement; the yield of wool has been doubled, and today American Merinos are greatly superior to any sheep in the world as wool producers; but we should not be content with what has been done, and I fully believe, with our increased knowledge, twenty years or less of systematic breeding, in the right direction, and with the proper result in view, would give us a race of American Merinos truly worthy of the name, producing twice or more the yield of clean wool now grown and not one-half as much grease and yolk. What society and what man shall be the pioneers in this good work?—*Cor. N. Y. Tribune.*

The Boar and his Keeping.

Whether the pigs are intended for pork or for breeding purposes, the general care to be given the boar will be in either case about the same. From the time he is five months old he should be kept by himself. He should be provided with a comfortable shelter in an enclosure where he can have the exercise needed to keep him in a healthy and growing condition while young.

As a preventive of his becoming vicious or learning to break fences, it is best that a lot or other enclosure intervene between his own and that in which other hogs—particularly open sows—are allowed to run. If thus kept from the start, any ordinary fence will be sufficient. If by the neglect of this preventive he should acquire the habit of lifting gates and breaking fences, much trouble in restraining him may afterwards be expected. In case he becomes bad in this way, a strong, close fence will be needed to confine him, and besides he should be treated to one or two rings in his nose. A part of an apple orchard, where the trees are so well grown that he can not injure them, say half an acre, or more, as convenience for fencing may allow, would make an excellent yard, affording both shade and pasturage. Where accomodations to this extent cannot be had, and the boar must be kept in a dry lot, let it be a yard adjoining the kitchen garden, in order that he may be conveniently supplied every day during the growing season with weeds and refuse vegetables. Purslane (*Portulaca*), lamb's quarter (*Chenopedium*), pig weed (*Amarantus*) and other well-known garden pests, are excellent food, and may as well be utilized in this way. He will be greatly benefited if sour milk and the best of the kitchen slops can be given him. He should, besides, have at all times a plentiful supply of good, fresh water. His daily allowance of soaked oats or corn should be governed in amount by the quantity and richness of the supplies above mentioned, bearing in mind that he is now to be fed with a view to the most rapid growth consistent with sound health and the best possible physical development, rather than to be made fat. He should be fed all he will eat until a year old; but this cannot be done, and he kept in the thrifty growing condition to be desired, unless special care be taken in the manner of feeding; the kind as well as the quantity of feed being regulated by or changed according to the change of season. The young boar should not be put to service until he is eight months old. At this age it will be no injury to him if allowed to serve one sow a week, although he will get better pigs when a year or more old than at a younger age. When ten months old he may serve two sows each week, and when a year old, if properly cared for to that time, one every other day. When eighteen months old and over he may safely be allowed one sow a day, but must, in the meantime and when in use, be well and regularly fed. As a rule, the boar is needed only for a month or two in the fall and again for several weeks in the spring. As it is usually desirable to have the sows farrow as nearly as possible at the same time, the temptation is to crowd the service of the boar into the shortest time possible. When only a few sows are kept little harm can result from this, but in large herds the advantage gained by having the little pigs all of nearly one age, is at the expense of strong, healthy litters, that would mature to the best advantage, whether as feeding hogs or as breeders.

When a sow is to be served she should be turned into the lot with the boar, as it is usually an easier matter to drive the sow away than to return the boar to his place. It is the general opinion among practical men that one service only should be allowed. Two or more are not believed to be any more certain to result in numerous and healthy progeny than one, but are considered a useless expenditure of the strength and vigor of the boar.—*The Swine Breeder's Manual.*

The Value of Pig Manure.

There is much misconception in regard to the relative value of manure from different animals. It is often said that the manure of pigs is richer than that from cattle, horses, or sheep. This is sometimes the case, and sometimes not. It depends entirely on the food. An animal does not "make manure" any more than a stove makes ashes, or a thrashing machine makes grain, chaff and straw. We feed a thrashing machine with a certain number of bundles of wheat, and get from it a certain amount of grain, straw and chaff—but the machine does not make them. It was all in the bundles, and the machine merely separated them. And so it is in the case of an animal. A pig has no more to do in making rich or poor manure, than a thrashing machine has in making white or red wheat. It depends entirely on the food. There is little or no difference in the composition or value between the manure of a pig fed on clover, and that of a sheep, or a cow, or a horse, fed on clover. But if a pig is fed on clover, and the sheep is fed on straw, the manure of the pig will be by far the most valuable, simply because the clover contains a greater proportion of the more important elements of plant-food. A ton of corn fed to a pig, will not give manure worth as much as a ton of clover-hay fed to a sheep, for the simple reason that a ton of clover hay contains more of the valuable constituents of plant-food than a ton of corn. But a ton of pig manure from a corn-fed pig may be, and often is, worth more than a ton of sheep manure from sheep fed on clover hay. The explanation of these apparently contradictory statements is this: A ton of corn contains more nutritious matter than a ton of clover. It contains more starch and oil, and these are digested and assimilated by the pig, and consequently there is a less quantity of matter to be voided as excrements. On the other hand, although a ton of clover contains a greater proportion of the more valuable elements of plant-food than a ton of corn, yet the clover does not contain nearly as much nutritious food as the corn. There is a large proportion of crude material that cannot be digested, and this is voided in the excrements; consequently, we get more manure from the ton of clover-hay than from a ton of corn. It is not worth as much, weight for weight, but it is worth more as a whole, because there is more of it. In other words, a ton of pig manure from corn may be worth as much agtin as a ton of sheep manure from clover hay; and, in point of fact, pig manure is ordinarily worth much more *per ton* than the manure from cows, horses or sheep. But, at the same time, it is equally true that, if the same food was fed to a sheep that we feed to the pig, the manure of the sheep would be equally valuable. Pig manure is usually more valuable, in proportion to its weight or bulk, than ordinary farm-yard manure, because the pigs are fed on more nutritious food, or, in other words, on food containing a less proportion of crude, indigestible matter, and consequently we get less bulk of manure from the pig, but it is more valuable. But it is a grave error to suppose that a pig will make better manure than a sheep, a cow, or a horse. The following table, prepared by Mr. Lawes, shows the average composition of different articles of food, together with the relative value of the manure made from the consumption of one ton of each food.

		PER CENT.					
		Total dry matter.	Total mineral matter (ash).	Phosphoric acid reckoned as phosphate of lime.	Potash.	Nitrogen.	Value of manure (in $ etc.) from 1 ton (2,000 lbs.) of food.
1	Linseed cake	88 0	7 00	4 92	1 65	4 75	19 73
2	*Cot. seed cake	89 0	8 00	7 00	3 12	6 50	27 86
3	Rape cake	89 0	8 00	5 75	1 76	5 00	21 01
4	Linseed	90 0	4 00	3 38	1 37	3 80	15 65
5	Beans	84 0	3 00	2 20	1 27	4 00	15 75
6	Peas	84 5	2 40	1 84	0 96	3 40	13 38
7	Tares	84 0	2 00	1 53	0 66	4 20	16 75
8	Lentils	88 0	3 00	1 89	0 96	4 30	16 31
9	Malt Dust	94 0	8 50	5 23	2 12	4 20	18 31
10	Locust beans	85 0	1 75	.....	.....	1 25	4 72
11	Indian meal	88 0	1 30	1 13	0 35	1 80	6 65
12	Wheat	85 0	1 70	1 87	0 50	1 80	7 98
13	Barley	84 0	2 20	1 35	0 55	1 65	6 83
14	Malt	95 0	2 60	1 60	0 65	1 70	6 65
15	Oats	86 0	2 85	1 17	0 50	2 00	7 79
16	‡Fine pollard	86 0	5 60	6 44	1 46	2 60	13 34
17	‡Coarse pollard	86 0	6 90	7 52	1 49	2 58	14 26
18	Wheat bran	86 0	6 60	7 95	1 45	2 55	14 29
19	Clover Hay	84 0	7 50	1 25	1 30	2 50	9 94
20	Meadow hay	84 0	6 00	0 88	1 50	1 50	6 43
21	Bean straw	82 5	5 55	0 90	1 11	0 90	3 97
22	Pea straw	82 0	5 95	0 85	0 89	.....	3 74
23	Wheat straw	84 0	5 00	0 55	0 65	0 60	2 86
24	Barley straw	85 0	4 50	0 37	0 63	0 50	2 25
25	Oat straw	83 0	5 50	0 48	0 93	0 60	2 90
26	Mangel wurzel	12 5	1 00	0 09	0 25	0 25	1 07
27	Swedish turnips	11 0	68	0 13	0 18	0 22	93
28	Common turnips	8 0	68	0 11	0 29	0 18	93
29	Potatoes	24 0	1 00	0 32	0 43	0 35	1 39
30	Carrots	13 5	7[illegible]	0 13	0 23	0 20	88
31	Parsnips	15 0	1 00	1 40	0 36	0 22	1 16

* The manure from a ton of undecorticated cotton-seed cake is worth $15.74; that from a ton of cotton-seed, after being ground and sifted, is worth $18.95. The grinding and sifting, in Mr. Lawes experiments, removed about 8 per cent of husk and cotton. Cotton-seed so treated, proved to be a very rich and economical food.

‡ Middlings, Canielle. ‡ Shipstuff.

This table is of great value to the farmer. Hitherto, we have worked pretty much in the dark in regard to the profit or loss of fattening pigs. Many farmers contend that there is no profit in feeding hogs, while others claim that, when the manure is taken into consideration, there is no farm stock that pays so well. But it must be confessed that the wildest estimates are often made in regard to the value of the manure. By the aid of the above table it will not be difficult to form a pretty correct estimate of the value of the manure from any given lot of pigs, provided the kind and amount of food consumed is known. Thus, if a pig was fed exclusively on corn from the time it was weaned until it had gained 350 pounds, it would eat about 1500 lbs. of corn. Now, as the manure from a ton of corn is worth $6.65, the manure from 1500 lbs. is worth $4.99.—We may assume, therefore, that when pigs are fed on corn, in the production of every hundred pounds of pork, live weight, we get $1.42 worth of manure. Or, assuming that a fat pig will dress 80 per cent. of its live weight, we may conclude that in the production of every hundred pounds of pork, we get manure worth $1.78. In other words in calculating the profit or loss of feeding pigs on corn, we may add 1¼ cents per lb. (in gold), to the price of the pork for the value of the manure obtained. On the other hand, if the pigs are fed on peas, we get manure worth more than twice as much, and may add 3½ cents a pound to the price of the pork for the value of the manure made in its production. In this case, if pork sells for 7 cents per pound, we may calculate for every dollar's worth of pork sold, we have 50 cents worth of manure; or, if the pork sells for 10½ cents per pound, for every dollar's worth of pork sold have 33 cents worth of manure in the pig pen. Boussingault states that pigs from 5 to 6 months old will eat 19 lbs. of green clover per day—equal to about 5 lbs. of clover hay each. On such food we may safely calculate that a good pig will gain a half pound of *pork* a day; and if so, a pig that would dress 200 lbs would have eaten green clover equal to one ton of clover hay; and as the manure from a ton of clover hay is worth $9.64, we may calculate that every hundred pounds of pork so produced, leaves us $4.83 worth of manure. When pigs are fed skimmed milk, we shall probably not be far wrong in estimating that the manure made in producing 100 lbs. of pork is worth $5.00 Taking these estimates together, and striking a mean, we have the following result:

Value of manure in producing 100 lbs. of pork from Indian Corn	$1 78
Value of manure in producing 100 lbs. of pork from Peas	3 70
Value of manure in producing 100 lbs. of pork from Clover	4 83
Value of manure in producing 100 lbs. of pork from Skimmed Milk	5 00
Average of the whole	$3 79

In other words, where pigs are fed on clover and skimmed milk during the summer, and are afterwards fattened off half peas and corn, we may calculate that every pound of pork sold, leaves on the farm 3½ cents worth of manure. It must be borne in mind that these are *gold* prices, and also that this is merely the value of the manure made by the pigs from the food consumed. The litter and other materials thrown into the pen have not been taken into the account. The pig cannot be credited with the manure so obtained. If we throw into the pen 100 lbs. pea or bean-straw, we add about 19 cents to the value of the manure heap; but this is not derived from the pig, but from the straw; and so it is with anything else thrown into the pen. The pig converts it into manure, but adds nothing to its value. The pig creates nothing. Whatever of value there is in the manure heap is derived from the food consumed, and from the materials used as litter. And yet it is nevertheless true, that we can obtain from the pig pen a large amount of valuable manure that otherwise would be wasted. On farms, we have seldom time to attend to such matters, and there is not as great a necessity for it; but persons who have only a garden or a small place, should have a pig pen, with a small yard attached, into which all the refuse material of the garden can be conveniently thrown—such as the clippings of the lawn, weed, potato tops, the pea and bean haulm, leaves, coal ashes, the loose dirt that is raked up in the garden beds, alleys, and walks, and the thousand and one things that we denominate rubbish. The whole of it should go into the yard attached to the pig pen. This is a much better way of disposing of it, than endeavoring to make a "compost heap." With such a yard, there never need be any trouble in determining where the material in the wheelbarrow should be emptied. You have a place for all rubbish that is lying around loose, and it will be an easy matter to keep the premises neat and clean. "But oh, the smell!" exclaims a gentleman who let his Irish coachman keep a pig, "I cannot endure it." True; but this is the fault of the man, and not of the pig. A respectable well brought up pig is the cleanest of our domestic animals. Let him be washed once a week, and let plenty of dry earth, or soil of any kind, be scattered freely and frequently about the pen and yard, and all trouble from this source will cease, and the pig, if well bred, and well fed, will become one of the most popular features of the establishment, and he will be profitable also. He will pay in using up the refuse from the house and from the garden; pay in delicious hams, spare ribs, and tenderloin; pay in firm, white sweet lard; and above all, he will pay in furnishing a large, rich compost for the garden, which with the addition of a little super-phosphate and guano, will pay double and treble in the abundance of crisp vegetables and well developed fruit. The main point in managing a pig pen in such a case is, to furnish an abundance of earth to keep it clean. The pigs will root it over and mix it with the manure. The earth especially if of a sandy nature, will at once favor decomposition and absorb the gases, and they in their turn will develop the plant-food in the soil, and we get a large quantity of manure that is free from smell, and not unpleasant to work over or use in the garden. Where horses are kept, the refuse litter from the stables should be thrown into the pig pen. Horse manure is apt to ferment too rapidly, while pig manure is very sluggish. Mixing the two together improves both; and besides, the horse manure, when dry, makes a good bed for the pigs, and saves litter. For garden vegetables, rich manure is especially valuable. It is desirable to concentrate the manure as much as possible. We do this by fermentation, which reduces the bulk, and at the same time renders the plant-food in the manure more immediately available. The plan here suggested, of throwing the dry manure from the horse stables into the pig pen, will tend still more to concentrate the manure. Pigs void large quantities of liquid, which contains nearly all the nitrogen of the food. The horse manure will absorb this, and, of course, we get a much more concentrated manure from the pig pen than when straw alone is used for bedding. We may not get *any more* plant-food from the two combined than we should if the dropping from the stables and from the pig pen were used separately, but we get in more concentrated form and in a more available condition; and this is a point of far greater importance than is usually supposed. We are inclined to believe that many of the diseases which affect vegetables in our old gardens are caused, or at least increased, by the excessive accumulation of carbonaceous matter in the soil, caused by the frequent use of manure deficient in phosphoric acid, potash ammonia. The manure from a pig pen littered with horse droppings, thoroughly decomposed and mixed with earth, would furnish garden vegetable condition, and there would be less danger from fungi than where a large quantity of poor manure was frequently used. On many farms half the value of the manure made by pigs is wasted. There is no part of the establishment so miserably managed as the pig pen. It is often nothing more than a pen of rails, with a little hovel in one corner, covered with corn-stalks, or straw, and the pigs are left to eat the corn on the ground, and wallow in mud and filth. If pork can be made at a profit in this way, it must be a good business when conducted properly.—*From Harris On the Pig.*

Inflammation of the Udder; so-called Garget.

The cause of garget in the cow are principally improper treatment after calving, exposure to cold and wet, the leaving of portions or dregs of the milk undrawn at the time of milking, a habit of lying in such a posture as to crush the udder, and the allowing of the animal to acquire an unduly plump and fat condition, especially at a time of hot and sultry weather. The causes in the ewe are similar; through the chief are wet lair, hard pasture, the removal of one of twin lambs from suckling, and various kinds of constitutional derangement.

An udder effected with garget may suffer in either one or more quarters; it swells, hardens, becomes knotty, has more heat than in a state of health, and appears to be much pained when pressed. The secretion of milk either lessens and becomes mingled with blood and pus, or is entirely arrested and gives place to suppuration, and in very bad cases to gangrene. The hinder extremities, particularly about the fetlocks, the hock, and the hip joint, in many instances, sympathize with the udder, and undergo so much swelling and inflammation as to prevent the animal from rising, except with great difficulty, or even from rising at all, or most from moving. The system in the ewe are similar, but, in the most cases, they are both very sudden and exceedingly violent, and may raise such a gangrene as will prove fatal to the animal within twenty-four hours of the commencement of the attack. The symptoms in the heifer are comparatively gentle, and have been supposed to resemble those of rheumatism in the human subject, and are removable by means of the simple and natural remedy of dry pasturage and clean bedding.

A cow attacked with garget must be kept in the stable and have a dry, soft bedding; she ought to be fed for a day or two on mashes, with a little hay, and when she becomes well enough to leave the stable, she ought to be turned on quite dry, and rather short pasture. If the attack be slight, she should have her udder subjected to friction and sucked at the unrestrained will of the calf; if it has a decidedly inflammatory character, and be accompanied with fever and loss of appetite, she should have a dose of physic, and have her udder abundantly fomented with hot water, be thoroughly milked thrice a day, have a quantity of camphorated mercurial ointment rubbed well into the udder after each milking, and washed off again with warm water immediately before the next milking. If the hardening proves obstinate, an iodine ointment, composed of lard and hydriodate of potash, must be substituted for the camphorated mercurial ointment; and if gangrene sets in and developes a putrifying ulcer, the sore must be well cleansed with warm water and freely washed with a week solution of cholride of lime till the gangrenous matter be considerably reduced, and then alternately dressed with Friar's balsam, and washed with the solution of chloride of lime, till the gangrenous matter wholly disappears. If indutation and chronic enlargement, accompanied by deficiency in the secretion of milk, constitute after all the inflammatory action has been subdued the iodine of potash must continue to be applied in the form of ointment, and, if need be, internally administered in some other form. The proper treatment of the gargeted ewe is in all respects similar to that of a gargeted cow.—*Prairie Farmer.*

Buying and Selling Stock.—Buying and selling stock is an important part of every farmer's business, even in sections where stock breeding is not a specialty. It requires a good deal of judgment to do this successfully, and this will be only acquired by experience and the use of scales to weigh the stock occasionally. With some experience a farmer can learn to judge weights of cattle or other farm stock away from home, while his own may be weighed as often as he chooses. Even if the stock are not to be sold, it is very convenient for farmers to have scales, that they may know the comparative results of feeding different kinds of food.—*Farmer's Home Journal.*

The Dairy.

Common or Native Cows.

Scarcely a man, old or young, says *The Dairy*, ever hears of a notable thing done but he thinks to himself, "I could have done that." It is either want of opportunity or absence of thought in that particular direction, and the latter is by far more frequent than the former. A genius—or what is precisely the same thing; a successful man—makes his own opportunities. He gives his mind to his special idea, cultivates it, perfects it, and finds a place for it at once. It is precisely thus with regard to the improvement of our live stock. Let us take the shorthorns as representing the beef cattle, and the Jerseys as the type of dairy stock. These breeds have both been made. At one time they were the common races of their locality—scrubs, just as we call our common stock. But men conceived the idea of improving them. Bates and his neighbors in the North of England bred the shorthorns, and a few farmers in the little Island of Jersey cultivated that race. And now these two breeds are the most noted and valued of cattle. It will not do to despise popularity. There is something always back of success in everything; and it is wholly wrong to think the men who have paid thousands of dollars for Shorthorns and Jerseys were fools from whom their money was parted with proverbial haste. That is not the way of the world. And every farmer may learn a lesson from the facts and the suggestions which we have offered. We have a really excellent "native" race of cattle, which we in our carelessness, not to say ignorance, are content to call "scrubs." But like the modest, retiring farmer who is rarely seen or heard of, but whose work keeps the world a-going, these scrub cows are doing a vast work. They produce every year a thousand million pounds of butter and four hundred million pounds of cheese and yet no one has ever taken them—"by the hand," we were about to say—with an intention of elevating and bettering their position in life. But noble blood flows in their veins; the best of it, for out of it have come all the noted breeds. And it is quite as amenable as theirs to improvement. Here is a vast field for cultivation. And any farmer who gives his mind perseveringly to the pursuit can do what others have done, and make a great improvement in our native race.

He can select the best and bring in new blood for the best animals he can find, and perseveringly stick to his work, never looking back, and gaining a little every year, until he doubles the product of his cows. This is not difficult to do if the right way is taken. The way we have been pursuing has been the wrong one. No matter what animal is used when a calf is wanted, the cow will milk and the calf is deaconed or vealed. It is a grand record of our despised scrubs that in spite of such treatment they are still fairly good cows on the average. And they deserve better treatment, and will well repay every farmer or dairyman who will give them their just deserts in the way of improving them.

What One Cow will do.

A garden of one acre may be kept richly manured by the droppings of one cow. For five years past I have reserved one pet Jersey cow for the use of the house, and have kept her up in a stable near the house and fed her upon the lawn-mowings and a small plot of grass, with the vegetable waste of the house and garden. The produce of the acre is more than sufficient to feed the cow the year round with the help of four quarts daily of feed. This amounts to about one ton per year, costing about $35. I estimate the milk, cream, and butter of a good cow to be worth to a family $100 a year. That is, it would cost that sum to purchase the amount of these used in the family. There will be a surplus of milk or butter to be sold equivalent to a further sum of $50. The manure for one acre of garden will pay well for the labor of attending to the cow, and in ten years will pay for the cow besides. So that a good cow, when well cared for, will produce in ten years the actual sum of $1,000, besides paying for herself, her feed, and attention. Then there will be eight calves besides and skimmed milk and butter-milk to partly feed a pig or a flock of poultry. And then the comfort and pleasure of it.

I am already feeding down a small piece orchard grass under some apple trees the third time, by tethering the cow upon it. Some of the grass I have just cut the second time and some will give a third cutting. Fifty rows of sweet corn are now beginning to yield boiling ears and the stalk and husk go to the cow. There are pea-vines, beet-tops, small potatoes, and other wastes to help feed the cow luxuriously, and in this way the family cow may be kept in abundance throughout the year, while her manure will keep the whole acre growing richer every year and will provide a liberal quantity for the flower-beds and the drawf pears on the lawn. A very large quantity on the best manure is made by throwing the weeds with all the soil attached to them, the leaves that are raked up, and the wood ashes from the house, together with as much soil as may be needed into to a shallow pit in the cowyard and leading the drainage from the manure gutter into it. If a farm were only managed as one manages the garden, every acre might easily pay a hundred dollars; but the labor is not to be had, and one pair of hands cannot do it for more than five or six acres. But the time will come when it must be done; when the land becomes fully occupied and this great country has its 500,000,000 of inhabitants, a number which it can sustain with the greatest ease with a thorough system of cultivation.—*Cor. N. Y. Times.*

The Holstein.

The Holstein, says the *Western Rural*, is a most bountiful milk producer, and there is no better milk in the world for the cheese maker. In addition to this, the breed yields profitably on the block. What more need a breed possess to give it standing and to recommend it to a class that is so large that the Holstein breeders cannot supply it. She is under no necessity of making any claims as to merits which she does not possess. If one of our subscribers were to write us asking if the Holstein were a first class cow, we should answer yes. If he were to further ask, if we would advise him to breed Holstein we would give an affirmative answer, for we know that for general purposes she is a very superior cow. But if he were to ask if she was the best butter producer, we should answer no, and no Holstein breeders would honestly object to the answer. If a farmer desires a very large quantity of milk, for itself, or if the dairyman wishes milk for making cheese, unquestionably the Holstein is the cow he wants. If he wishes a uniformerly fine article of butter, or a large quantity of butter. he will find other cows that will suit him better. If this were not true, we should have in one breed of cattle all that any of us could desire, and we have no such breed yet. Our cattle possess different merits, and if we accord to the Holstein as large an aggregate of merits as any breed possesses, it ought to be sufficient.

Their large compact frame recommends them for beef very highly, and in every particular, except as here noted, they are a model animal. Those who breed them can well be proud of the Holsteins, and independent of any extravagant claims, or unseemly booming, they cannot help growing in popularity. Their color is black and white, and recommends them or not, according to the fancy of the individual. To us the markings of the Holstein are pleasent. But after all color amounts to little, except as it may indicate the disposition of the animal, and some assert that it does, though we are not fully prepared to endorse the theory. All the consideration that color is legitimately entitled to, is whether it pleases us or not. When it is possible a man had better have about him what he regards as beautiful. It will at least be a source of satisfaction to him. But paying for color for any other purpose, is nonsense, though a vast deal of money has been paid for white and peculiarly colored noses.

Forking-Up the Garden.—Gardeners understand the good effect turning up the soil late in the Fall has upon the next year's crops, says the *Germantown Telegraph*, but there are many others—those who have small gardens, and in this class are many well-to-do farmers—who, by neglecting this work, only raise half a crop of vegetables, and these of an inferior quality, and then they wonder why their more knowing neighbors do so much better. Hence we cannot too often repeat the advice that if they will use the garden fork and turn the soil up full fork deep late in November, allowing it to remain in lumps all Winter exposed to the frost, it will have much to do in putting the ground in excellent condition, and tend greatly to add to next year's crops. This is especially the case where the ground is not so treated at all; but we would mention that to do this once in two or three years, instead of every year, as some gardeners do, will produce equally good effect. Gardens and especially old ones should be limed about once in five years, though but lightly, say at about the rate of thirty bushels to the acre, and lightly salted every year at the rate of from six to eight bushels per acre, applying it evenly to avoid injury. Keep the salt from coming in contact with box-edging and all other evergreens, very small trees, etc. Such a course will recuperate your old gardens in a surprizing manner.

Milk Dairymen should be the most independent of all classes of industry. It is so easy for those in any one locality to be associated and to have an agent of the association at the point of sale to dispose of the milk. The channels through which milk flows into the large markets are now so well settled and worn, that it would be impossibe to procure a supply from other sources. If the milk producers were united, they could control everything. By having a creamery in the city to take the surplus milk and turn it into butter or cheese, they could divert any part of the product which might be desired, and so keep a perfect balance between the demand and the supply. By having creameries of their own at home they could work up the whole product when desirable, and so wholly stop the flow to the city market. Why they should consent to be cheated, or defrauded, or controlled in any way seems to be incomprehensible, unless they were wholly without organization. With a proper organization they could control everything their own way.—*The Dairy.*

Poultry Yard.

The Several Breeds of Geese.

While many people keep geese in all parts of this country, many more would keep this profitable sort of live stock, we know, if if they only knew how very profitable the improved varieties are when kept under sensible management. But it is not of the qualities of geese in general or indivdually, or of the profits to be realized by cultivating them, that we write now, but of the different varieties of geese do we wish to speak.

The Embden geese are the largest white varieties of the goose family. They are nearly if not quite as large as the Toulouse which celebrated the country over for their immense size. Embden geese are splendid for feathers. they have many admirers among those who yearly sell feathers in the city markets. Their feathers are fine and fluffy, and an incredible quantity of them, too. Not that the white feathers are any softer than any other kind, but that this goose carries such a fine lot of them and they look so nice and clean that one longs to have enough, at least, to fill a pillow to rest his weary head upon. They mature quickly, are hardy, fair layers, and taken all in all, are well worthy of the attention of all who have a suitable place for keeping geese.

Toulouse geese, as is evident from the name, are of French origination, and are one of the heavy weights among water fowls. They are a gray goose in general color. More particularly speaking, however, they have a dark head, neck and back; under parts of body, wings and neck, a light gray. The Toulous are a "low down" goose, if there is such a thing as a goose being "low down."

When well grown and in good flesh their under parts nearly touch the ground. Pairs of these geese will weigh forty pounds or more when only in moderate flesh. The Toulouse is a pretty good layer, and a very good hatcher and mother. Some care is necessaay in feeding or they will be made too fat to either lay or hatch good.

Toulouse geese can be kept without any more water than they need to drink, although they, like all other water fowls, will thrive better if they had a pond large enough to take a good bath in occasionally. Grass, nice, fresh, short grass, is the principal food of these geese from the time snow leaves the hills untill it comes again. These geese are just the right size to market in the early winter. They will have attained a good size, and be, withal, so full and plump that they never lay in the market long.

African geese are the largest of all our geese, and, we may safely say, the rarest, too. They, like the Toulouse, are a grey goose, with the general characteristics of all grey geese darker above than below. They have a heavy dewlap under the throat which gives them an odd appearance. They are but indifferent layers, and on this account with the very high price that is asked for a pair, doubtless, is the reason of the scarcity. They are said to be a very toothsome bird, and certainly there is enough of them. Their laying qualities could be improved no doubt, were they selected and bred with an eye to that point, instead of sacrificing all to color and size.

The brown and the white China geese are great favorites on account of their laying qualities. Geese of these varietics will lay an incredible number of eggs in a single year. Somewhere we have seen where some white China geese were credited with laying in the early winter. How that was, we could not say; but it is an undisputed fact that they are the best of all geese as layers. China geese are not large when compared with Toulouse, Embden, or African geese; but are about the size, or, perhaps, a little larger, then common geese. Both of the China geese have large knobs on their bills at the base, the same as the African. These geese are very noisy. They are as good as a watch-dog to keep away thieves of all kind; but on this same account (their noisy squalling) they are not fancied by many. They would be a good variety to cross on the common breed of geese to increase egg production.

Egyptian geese are the most beautiful of all the geese family. They are in shape rather long and slender, body more like a very thin duck than like a goose's; long legs; long tail; and very long strong wings. They are a greyish color above, breast greyish, under part of body buff or yellowish in color, and all pencilled with black. Tail pure black in color; eyes red; a chestnut patch on each side of the face, and a large patch of the same color on the breast. These geese are strong on the wing, and move through the air without any of the antics shown by the more clumsy breeds when they essay to fly. They usually roost in trees, or if they are housed up, they delight to have a high perch. Egyptian geese are certainly worthy of being more generously cultivated, for their ornamental qualities, if they had nothing to recommend them.

The Danubian or Sabastapool geese are among geese what the silky fowl is among chickens. They are pure white in color, medium in size, and would be no curiosity whatever were it not for their beautiful feathers. From their back, side and tail, long feathers, curled like a lad's plume, flaunt gracefully. They are certainly unique, which is the same thing as saying that they will always have admirers.

Canada, or wild geese, are the well-known variety that every fall and spring passes over our heads, uttering their "honk hawk e-honk," that electrical sound that makes the blood of the bay shooter shoot with quivering pulsation through his veins. These geese have been domesticated, and are bred in many of the States, and also in Canada. In color they are grey and white. In size they are much larger than the average of common geese. They do hot lay until three years old, which is an objection, and a serious one as regards their future popularity. They have been crossed with the common goose, producing mules, which we, believe, are always sterile. The wild goose is a delicate and toothsome bird when killed before he becomes a legal voter, or years to that effect. —*Poultry Messenger.*

Horticulture.

The Orchard and Fruit Garden—November.

Young apple and pear trees should be looked after and all weeds and grass that may have escaped the hoes during the latter part of the summer, removed from about them for some several feet distant on all sides from the collars of the trees, so that no harbor may be left for mice near the trees; these little animals, when pressed by hunger during the winter months, do a vast amount of injury by gnawing the bark off of the roots and collars of fruit trees; especially is this the case in light soils, and if weeds or grass *should* be left to grow near such trees and rob them of the soil's fertility, it will likely add further injury to the trees to leave such rubbish remain about them during winter.

The impression prevails to some extent, that late planting of trees in the fall is usually attended with unsatisfactory results; this however, is certainly not supported by judicious practice. Of course it will not do to expose the roots in freezing weather, neither can planting be properly performed when the soil is excessively wet; but during mild open weather any time from this until spring, when the soil is clear of frost and otherwise in good order, planting can be done as successfully as any other time. If

trees are ordered from a distance and arrive too late to get them planted before freezing weather sets in, they should be unpacked and carefully trenched or "heeled in"; and as the nurseryman fits and packs the roots together as closely as he possibly can—for several reasons—it will not do to "heel" them in without separating the roots sufficiently to permit their every part to come in contact with the soil, and thus prevent injury by frosty air and "drying out"; then when thus cared for, if an open spell occurs, planting can be safely and successfully proceeded with.

Grape vines can now be pruned and securely tied to either stakes or trellis, and just here we wish to give expression to the solid satisfaction we experienced this year, resulting from a little labor in "bagging" the "fruit of the vine." It so very often occurs that such new and valuable discoveries (?) "die a bornin'" that we are "considerably shy" about investing labor and time in them, but the *rot* having annually, for the last several years robbed us of many promising clusters, and having several of the new varieties to fruit this season, we did, in the absence of paper bags of the right kind, invest in cheap muslin bags, and concealed within them each a nice cluster of grapes; this was done when the fruit was nearly half grown. Moore's Early, first fruit to ripen, came out of the bags in splendid condition for the palate. While the quality is very similar to that of the Concord, it is so much earlier as to make it very desirable. "Early Dawn" that we paid a huge price for, and from which we expected much in the way of earliness, turned out to be a *late*—yes very late, *red* grape instead of an early black one—score *one more* for a New Jersey nurseryman! say we. Lady came out of the bags in the height of fine appearance and excellent quality; Jefferson was grand; Bacchus, so *much* like Clinton, we failed to discover any difference; and then Pocklington, that world's wonder (?) of a couple years back, was about as good as Martha, and not a "whit" better or less foxy; Duchess not as large or as good as the Elvira; the latter was decidedly better this season with us than ever before, and as it was the first year's fruiting of some of the above, in which we were disappointed, it *may* be possible that they will improve with age. Of the "bagging" we wish more particularly to write at this time, and from one year's trial our faith in it has been greatly increased, so much so as to warrant us in recommending it to the readers of THE AMERICAN FARMER for trial another year. A little sack of any thin or cheap material, say seven or eight inches long and four to six inches in width, can be made up by the little girls or rapidly run together by the sewing machine; then before the grapes are large as ordinary garden peas, slip a sack over a cluster, lap the ends of sack over the cane and fasten with a pin and the work is done. We advise all that have vines to try it.

Mulching should not be put on strawberry beds too soon, but when *cold* weather begins. then a covering of coarse barn-yard manure, straw, pine-fallings and other litter that will shelter and protect against sudden changes will be beneficial and profitable.

Kitchen Garden—November.

The gardening season is gradually drawing to a close; it has been, on the whole, a good one, vegetables being abundant and fine.

I have just had a little lesson in spinach sowing that I will not be apt to forget another year. Using a seed drill I set it to sow rather thickly, but after sowing a few rows the seed disappeared so rapidly that I sowed the remainder through the next smaller aperture. Those first sown came up nicely, but of the rest only here and there a few, necessitating re-seeding by hand, the ground being now too stiff for marker or drill. This operation, besides requiring double the quantity of the seed sown by the previous thin seeding, cost several times its value in the labor of opening and closing drills with the hoe, and, to crown all, a superfluous walk in a stooping posture, at the rate of six or seven miles to the acre, the rows being fifteen inches apart and one hundred and fifty or more yards long. Now, I am quite sure that what I call *thin* seeding would have been quite thick enough had the work been done on real market-garden soil, but here we must rely on force of numbers to pierce the surface, and extra thick seeding will, in the end, always be the most profitable.

Mr. Massey has had trouble with his early tomatoes rotting or blighting, and thinks the roots of certain kinds of trees have had something to do with it. I have no knowledge of what is known as *the* tomato rot—have seen rot enough from contact with the ground in wet weather—but one thing I do know, viz.: that proximity to the roots of almost any tree is detrimental to any kind of crop. I had the luck to be settled here sometime before my present chief, (who is strongly opposed to tree cutting) and got leave to root out all obnoxious trees, otherwise I should have been in misery ever since. Trees and cultivated land are natural enemies, and if the land is good for anything the trees are simply magnificent and costly weeds, swallowing up all the manure and giving no returns. Hedges are no better. He is either a rich man, or his land is cheap, who can afford an Osage hedge. I find my profit in giving the woods and hedges a wide berth, but I hope I am none the less a lover of trees and hedges in their proper places. Like Mr. Massey, I consider that grass is preferable to cultivated land around fruit trees after they are well established—a good fruit tree is worthy of space for head and heels.

The lifting and storing of turnips, parsnips, salsify, leeks and cabbages will now be in order. Although parsnips keep well enough if left in the ground, they do not keep sound when lifted, without a proper covering of earth. The practice of placing cabbages heads downward and covering well with leaves is much simpler than heeling in, which I find to be very laborious even with the aid of the plow. Celery is hardly safe out-doors after the 20th unless earthed up to the top. On the other hand when housed or otherwise disturbed it sometimes suffers from the mild spells we usually have after the first nipping frost. A temporary rough earthing up until sometime in December is undoubtedly the best practice where it can be carried out. He who can show a few heads or hearts of well-blanched celery latest on in spring, by whatever mode of preservation, achieves something that he may well be proud of. Rats are fond of housed celery and they know, too, when it is properly blanched.

A few cabbage butterflies have lately made their appearance, but too late to do any damage, which shows that there is no use of raising a panic over a new visitation of insect enemies. Time and the climatic variance of successive years, one with another, help to tide us over evils that we cannot control. We can scarcely hope that anything will be found as effectual on cabbages as Paris green on potato vines, but even partial remedies are not to be despised.

The early cabbages sown in September will now be strong enough to set out. Plant a few for first early and raise plants for the main crop in a mild hot-bed in February, or sooner. Having had but little experience with fall set plants I am not able to say whether or not there is any advantage in setting them on ridges and facing them in a certain direction, that is, on *drained* land—would like to have the views of others on that point.

In setting out raspberries and blackberries the plants should be cut back closely, and when the planting is finished throw a furrow from each side on to them, or cover with litter until spring.

The garden should get a good clearing up, all vacant spaces plowed and a portion of it well limed. Deepen and improve flowerbeds by adding to them fresh earth which for most plants is better than manure. Rosebeds should be heavily mulched with well-rotted manure.

JOHN WATSON.

Garden Notes.

Messrs. Editors American Farmer:

The present season, or more properly the past, as by the time this comes before the reader crops will be harvested, and frost will have destroyed those from which we continue to gather until his icy grasp takes all at one fell swoop. The early part being wet and cold, quite a large percentage of corn failed to germinate, making replanting a necessity, and if there is anything amongst crops more annoying than replanting corn, we have not found it. With regard to rejecting the points and the butts of the seed ears, each person may use his own judgment or fancy, but when the grains are shelled off the cob for seed if any show a black speck at the point it is advisable to reject all such, no matter from which part of the ear they come, nor how numerous they may be.

Pears have been an abundant crop, and so far as the writer's observation has extended, there has been less injury from "Fire Blight." And I would say, here, that my experience precludes the possibility of my concurring in the views expressed by Mr. Massey, as to the cause of it. Having never seen an instance where root pruning, however severely performed, resulted in that disease. Fire blight, such as the writer is familiar with by annoying experience, could not result from root injury, nor so far as the writer's experience has the disease at any time or in any instance come from the root upward. On the other hand a limb affected will conduct the disease toward the centre of the tree and downward. If, however, such diseased limb be cut out promptly, and as far inward as any sign of the disease can be traced, the disease is arrested for the present so far as that tree is concerned. The practice of root pruning of fruit trees, as for instance in orchard house culture in Europe, may sometimes be almost a necessity; but in our orchard culture here, the writer has not seen an instance where cutting the roots has proven beneficial to a pear worked upon a quince stock. And very little head pruning is usually necessary either. With strong growing varieties, worked upon a free stock, the case is different. Cultivators have to use their own judgment and skill, usually best acquired by practical experience. On one point, however, most cultivators agree, that is, as to the benefits which accrue from mulching fruit trees of every description.

I know a farmer, a careful reader of this periodical, in whose orchard a cow might almost hide herself by lying down in the clover, and beneath the trees as far as the limbs extend is covered with refuse straw, or something of the kind. The trees, under this treatment, are strong and healthy, the crops abundant, and that the fruit is fine the Editor can testify. If farmers would test this generally, both summer and winter, they would be gainers thereby.

Strawberries were an exceptional crop in both quality and quantity. This being our second year with some of our newer varieties, we have almost discarded all of them except Bidwell. Of the older kinds we would prefer to be without any or all of them rather than the variety "Chas. Downing." The Bidwell gave a good many berries eight to nine inches in their largest circumference, cockscomb shape, but would scarcely weigh an ounce and a quarter, the largest of them. This variety, however, never rusts, grows strong and healthy, withstands the heat of summer and the cold of winter unscathed, is a prolific bearer and of fair quality. Some of the varieties which we have described would do very well by potting the runners and making a new bed annually; this is not always convenient so we let them slide.

Some of the varieties of sugar corn we tested were of good quality, but not large enough to suit the prevailing taste hereabout. Of these we mention "Ne Plus Ultra" and "Amber Sweet," both very sweet and remarkably small cobs, but when compared with such varieties as "Stowell's Evergreen" and "Gregory's Mammoth" variety they are too small.

N. F. F.

Celosias for Winter Forcing.

Those who have never tried the Feathered Cockscomb for winter flowering can form no idea of the quantity of feathery plumes that can be cut from a few plants. Last winter we tried a few plants as an experiment and the result was so satisfactory that we expect to grow a much larger quantity this season. The plants should be gotten strong by being planted in the open ground, from seed sown July 1st. Early in September lift them with a good ball of earth, and pot them, keeping them in the house rather close and shaded until the roots get hold of the fresh soil. Then expose them to full sun and keep them growing rapidly. Pinch off the flowers as fast as they show until October, by which time they ought to have filled ten-inch pots with strong roots. Then give liquid manure weekly and be careful not to overwater. They should have the warmest and lightest part of the hot-house and a night temperature of 65°, and by Christmas will show nothing but one pyramid of flowers.

W. F. MASSEY.

Hardy Shrubs.

After an experience of fifteen years with a great number of shrubs, the *Rural New-Yorker* presents the following as the best for erage country home:

Viburnum plicatum should be mentioned among the first as one of the most valuable and beautiful flowering shrubs, far surpassing the older varieties of Snowball.

Chionanthus Virginica, White Fringe, is a native shrub or small tree, notable for its large leaves and graceful, drooping panicles of slender-petaled flowers that seem almost to float in the air, so slight are the pedicels which hold them to stems.

Pyrus Japonica, the Japan Quince, should find a place in every garden. The leaves are ever bright and glossy, while the blossoms are almost unequaled for brilliancy by those of any hardy, early blooming shrub. The range of colors is from white through rose to dark red. In clumps are small clusters composed of several or all of the different colors, we have during May a brilliant effect indeed.

Forsythia viridissima and *F. Fortunii*, Golden Bell, are the finest of the golden blooming shrubs. They begin to bloom about the middle of April, before the green leaves appear, and by May first are a mass of bright yellow. These plants are very effective, trained to a single stem. Fortune's Golden Bell bears flowers rather larger in size and a few days earlier than viridissima.

Hydrangea paniculata grandiflora, the great Panicled Hydrangea has proven very hardy. Its panicles of sterile flowers are often a foot or more in length, changing from a greenish white to pink as the nights grow cold. It is a coarse but showy shrub.

Spiræa prunifolia, the double Spiræa commonly called Bridal Wreath. The little

double white flowers appear in the late May, and soon the shrub becomes a mass of white, which lasts until June.

Spirea Thunbergii is one of the first of all hardy shrubs to bloom. It is a small bush, bearing white blossoms in great profusion.

Deutzias and *Weigelias* in variety may be selected from nurserymen's catalogues, since there is no great choice between them. All are pretty and floriferous.

Exochordia grandiflora bears white flowers resembling those of Crab Apples. The leaves keep green until after frost; the shrub grows to the height of ten feet, and is entirely hardy in this climate.

Cercis Japonica, the Japan Judas tree, wreathes its naked branches in late spring with rosy purple flowers, and later clothes itself with shiny, thick leaves of a heart shape.

Halesia tetraptera, the Silver Bell, is a well shaped little tree, found wild in Ohio and southward. The white Bell flowers droop from the stems in small racemes leaving a winged seed, from which the specific name is derived. The stems of this little tree are clean and shapely, the wood very hard, the bark prettily striated with grey and dark brown.

These, says Mr. Carman, were we again laying out grounds, we should choose if confined to few. For the rest, we may mention *Pavia macrostachya, Stuartia pentygyna, Hypericum Kalmianum*, the Golden Nine bark, Rose of Sharon, Standard Honeysuckles, Smoke Tree, the improved kinds of Lilacs, and Purple Barberry.

Top Dressing of Lawns.

The grass on lawns that are cut close and often, says A. S. Fuller, in the N. Y. Weekly Sun, should have frequent top-dressing of some stimulating manure, in order to keep them in a good condition and of a rich green color. If the blades of grass are kept cut short they cannot assimilate as much sap as those that are left long or to grow to full size; hence the roots as well as the leaves are restricted in growth, and cannot spread as far in search of nutriment.

In preparing the land for a lawn, some persons go to a great expense in making the soil very rich and deep, expecting by doing this to avoid all expenses for future applications of fertilizers; and while every one will admit that thorough preparation is essential to success, still where the grass is kept cut short as on a well shaded lawn, the roots do not penetrate to any considerable depth, and all such materials are therefore wasted. Depth of soil and plenty of enriching materials may be essential in preparing for a good lawn; but in a few years a frequent top dressing with some stimulating fertilizers will be required to keep the grass in good condition.

Top-dressing in late fall may be made with well decomposed barn-yard manure; but unless it is very fine, there will be much of it to be raked off in spring, or the lawn will not have a clean bright look. It is quite often the case that lawns have a dull brown appearance during the months of July and August, which is the very season that one desires to have them look best; and, if the weather is dry at this time, there is no way of restoring the grass to its normal color, except by the application of water, which is seldom to be obtained at this season in sufficient quantities to do much good.

But the better way to keep lawns in good condition is to apply top-dressings occasionally during the summer whenever the weather is favorable. Almost any of the standard commercial fertilizers is excellent for this purpose, and if the requisite quantity is obtained early in the season, so as to have on hand when wanted, it can be applied just before or after a shower, at which time it will do more good. A very light dressing will answer each time, and it is better to apply a small quantity, or just as much as will be dissolved and carried down to the roots, than more. A few weeks later, or when another shower comes, put on a little more if the first application does not suffice to give the grass a vigorous start or growth. An application of plaster sometimes prove very beneficial in a dry season, and even a light dressing of common salt will sometimes produce a great change for the better in a fading lawn.

Hints on Transplanting.

The following instructions in Messrs. Ellwanger and Barry's Catalogue of Fruit will be found worthy of attention from all who contemplate planting trees.

The preparation of the soil. For fruit trees the soil should be dry, either naturally or made so by thorough drainage, as they will not live or thrive on a soil constantly saturated with stagnant moisture. It should also be well prepared by twice plowing, at least, beforehand, using the subsoil plough after the common one, at the second plowing. On new fresh lands, manuring will be necessary; but on lands exhausted by cropping fertilizers must be applied, either by turning in heavy crops of clover or decomposed manure or compost. To insure a good growth of fruit trees land should be in as good condition as for a crop of wheat, corn, or potatoes.

The preparation of the trees —In regard to this important operation there are more fatal errors committed than in any other. As a general thing trees are placed in the ground precisely as they are sent from the nursery. In removing a tree, no matter how carefully it may be done, portions of the roots are broken and destroyed, and consequently the balance that existed in the structure of the tree is deranged. This must be restored by a proper pruning, adapted to the size, form, and condition of the tree, as follows:—

Standard Orchard Trees.—These, as sent from the nursery, vary from five to seven feet in height, with naked stems or trunks, and a number of branches at the top forming a head. These branches should all be cut back to within three or four buds of their base. This lessens the demand upon the roots, and enables the remaining buds to push with vigor. Cut off smoothly all bruised or broken roots up to the sound wood. In case of older trees of extra size, the pruning must be in proportion; as a general thing it will be safe to shorten all the previous years' shoots to two or three buds at their base, and where the branches are numerous some may be cut out entirely.

Dwarf or pyramidal Trees, on the Quince Stock, if of two or three years growth, with a number of side branches, will require to be pruned with a two fold object in view, viz: the growth of the tree and the desired form. The branches must be cut into the form of a pyramid by shortening the lower ones, say one-half, those above them shorter, and the upper one around the leading shoot to within two or three of their base. The leader itself must be shortened back one-half or more. When trees have been dried or injured much by exposure, the pruning must be closer than if in good order.

Yearling trees upon Quince Stock Intended for Pyramids. Some of these may have a few side branches, the smallest of which be cut clean away, reserving only the strongest and the best placed. In other respects they will be pruned as directed for trees of two years' growth. Those having no side branches should be cut back so far as to insure the production of a tier of branches within twelve inches of the ground. A strong yearling, four to six feet, may be cut back about half, and the weaker ones more than that. It is better to cut back too low than not low enough, for, if the first tier of branches be not low enough, the pyramidal form cannot afterwards be perfected.

Planting.—Dig holes, in the first place, large enough to admit the roots of the tree to spread out in their natural position; then, having the tree pruned as above directed, let one person hold it in an upright position, and the other shovel in the earth, carefully putting in the finest and the best from the surface in among the roots, filling every interstice, and bringing the root in contact with the soil. When the earth is nearly filled in, a pail of water may be thrown on to settle and wash in the earth around the roots; then fill in the remainder, and tread gently with the foot. The use of water is seldom necessary, except in dry weather, early in fall or late in spring. Guard against planting too deep; the trees, after the ground settles, should stand in this respect as they did in the nursery. Trees on dwarf stock should stand so that all the stock will be under the ground, and no more. In very dry, gravelly ground, the holes should be dug twice the usual size and depth, and filled in with good loamy soil.

Staking.—If trees are tall and much exposed to winds, a stake should be planted with the tree, to which it should be tied in such a manner as to avoid chafing. A piece of matting or cloth may be put between the tree and the stake.

Mulching.—When the tree is planted, throw around it as far as the roots extend, and a foot beyond, five or six inches deep of rough manure or litter. This is particularly necessary in dry ground, and is highly advantageous everywhere, both in spring and fall planting. It prevents the ground from baking or cracking, and maintains an equal temperature about the roots.

After Culture.—The grass should not be allowed to grow around young trees after being planted, as it stunts their growth and utterly ruins them. The ground should be kept clean and loose around them, until, at least, they are of bearing size.

Treatment of Trees that have been Frozen in the Packages or Received During Frosty Weather.—Place the packages, unopened, in a cellar or some such place, cool, but free from frost, until perfectly thawed, when they can be unpacked, and either planted or placed in a trench until convenient to plant. Treated thus they will not be injured by the freezing. Trees procured in the fall for spring planting should be laid in trenches in a slanting position to avoid the winds; the situation should always be sheltered and the soil dry. A mulching on the roots and a few evergreen boughs over the tops will afford good protection.

Distance Between Trees in Plantations.—Standard apples, thirty to forty feet each way. In poor soils twenty-five feet may be enough. Standard pears and cherries, twenty feet apart each way. Cherries will do at eighteen feet, and the dwarf growing sorts, Dukes and Morellos, even at sixteen feet. Standard plums, peaches, apricots, and nectarines, sixteen to eighteen feet apart each way. Quinces, ten to twelve feet apart each way. Pyramidal apples, pears, cherries and plums, ten to twelve feet apart each way. The greater distance is better where land is not scarce. Dwarf apples (bushes), six feet apart. Currants, gooseberries and raspberries, three to four feet apart. Blackberries, six or seven feet apart.

A Window Garden.

Suppose there are just plain windows. Well, in the first place we do not want two or three shelves across them. No, we want an old table, and we want a pine box made to fix on top, say seven inches deep. We will ornament the outside to suit our taste, and means; we will saw the legs until we get the proper height and put curtains on them. We are going to provide for proper drainage, and instead of filling the box with soil we are going to put first in the box our plants in pots, just as we want them. You know what you have got, and I do not, then we are to pack closely around, between, and wherever we can put it, sphagnum moss. You will find this plan superior to the old one of planting the plants in dirt in the box. So many plants require to be root bound before they bloom. Then it is no trouble to take out a pot from the moss and replace by another. This is for the bottom of our window. Now from the center at the top of our window let us hang a basket, any kind you have, and put in it whatever you wish. Now at each side of the window casing put three one-pot brackets; that will bring the last one near the ceiling—just what we want. On each side at the top have a wax plant, Hoya. Train them up and across, and then around the room near the ceiling. I assure you they are nicer than Ivy, and how they enjoy the dry heat up near the ceiling, and you can sponge the leaves once in a while, and where you are you need never fear on getting up in the morning to see the piteous sight that greeted my eyes some three years ago, to wit: my Hoya that was in a corner spreading lifeless and dead. What a debt I owe Jack Frost. Our middle brackets will contain Begonias, cyclamen and the last ones ferns, or fuchsias, or anything you choose. Now, is that out of your reach? If able, one could have a nice box on legs made, but I think our old table will give us as much pleasure, and I've been there before I had my bay window. My garden was an old fashioned stand 2x2 feet, with a box six inches in depth put on the top. The drawer was left in, and I found it quite handy to slip in it an iron pan of boiling water quite frequently, and I had, oh, so much enjoyment out of that old stand. I would advocate the use of boxes instead of shelves every time. The heat seems to injure the roots of most plants, in particular Fuchsias, and in boxes they are protected, and seem to do far better. Now, I expect to hear soon of your having a window garden, the pride and joy of your heart, and the envy of your neighbors, so much so, that they will go and do likewise. I forgot to say that you must put in every place possible tiny pots of Lobelia, Kenilworth Ivy, and Maurandya, to run all over the Spagnum: and short clipped masses of parlor Ivy helps the looks wonderfully. In my mind I see it so plainly; and I do so hope that you may in reality see it plainer still.—*Cor. Park's Floral Magazine.*

American Peaches for England.

A late issue of the *Country Gentleman* has the following:

"The experiment of shipping peaches from Delaware to Liverpool this season has proved the business profitable when properly conducted. Mr. G. A. Cochrane, of Middletown, has invented a case in which to pack perishable fruit for long shipment, and has been shipping peaches from Delaware to Liverpool, in the Cunard steamers, in these cases. He had shipped tomatoes last year with success, but did not try peaches until this season. He picked peaches at Clayton, Del., August 20th, shipped them by ordinary freight to New York, and put them on the steamer on the 23d. They were landed in Liverpool on the night of the 30th, and were sold the next day, or eleven days after packing in Clayton. They were in fine order, selling readily at about $9 per case, costing him for fruit, freights and commissions, about $4.80 per case. There were 288 peaches in each case, each packed by itself, and thoroughly ventilated during the transit. It will be seen that he obtained 3½ cents each at wholesale, for his peaches. They cost him 1⅔ cents each, laid down in Liverpool. The practicability of safe shipment of perishable fruits to long distances was thoroughly demonstrated, and this fact is of the greatest moment to horticulturists everywhere."

FRESH manure is not good for plants: This is something to be remembered.

The American Farmer

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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Maryland Dairymen's Association.
Maryland State Grange, P. of H.
Agricultural Society of Baltimore Co.

Also, of the **Maryland Poultry Club,** Thos. W. Hooper, Secretary.

BALTIMORE, NOVEMBER 1, 1883.

MESSRS. HERKNESS' SALE OF JERSEYS.—The attention of breeders and all interested is called to the sale of imported Jersey cattle, advertised by the Messrs. Herkness, to take place at their Bazaar in Philadelphia on November 15th. They were selected by an experienced judge and comprise some very superior animals. Many of the cows have been bred to the most celebrated bulls on the Island.

The Washington County, Md. Fair.

This is said to have been one of the best fairs ever held in this State, both as to exhibits and financial success. The live stock display was large and varied, a number of breeders from Baltimore county contributing. On Short-horns, the Messrs. Schnebley and Dr. Sallenberger seem to have taken most of the prizes; on Jerseys, Mr. Andrew Banks (who got first for aged and 1 year bull, 2 year old cow and herd) and G. R. Dykeman, of Shippensburg, Pa.; Devon were shown by General B. F. Kelly, of Garrett; Guernseys by Mr. Watts, Dutch Fresians by Dr. Patterson, and Herefords by Mr. E. G. Merryman. In the heavy draft horse class, Mr. John N. Ripple was very successful with his Percherons, and Mr. Jesse Tyson's light draft horses won a number of prizes.

More Sales of Jerseys.

A combination sale of Jerseys in New York by P. C. Kellogg & Co., October 23 and 24, brought a good attendance and high prices on some animals. Mr. V. E. Fuller's heifers Jennie Pogis, Daisy Pogis, Violet Pogis and Primrose Pogis, sold respectively for $3,000, $2,400, $2,000 and 925. Mr. Wm. S. Taylor's cow Young Fanny sold for $1,025; Mr. S. M. Burnham's Queen of Ashantee for $675. Fifty-nine females sold the first day averaged $360.34 and the sixty-seven sold the second $372.56.

Pleuro-Pneumonia in Maryland.

We regret very much to learn of fresh outbreaks of this disease among the cattle of our State. The *Sun* of October 31st says:

"Dr. Robert Ward, State veterinary surgeon, in his search for pleuro-pneumonia on the Liberty road yesterday found that Mr. Daniel W. Lutz, of Forest farm, near Garrison postoffice, had lost three cows and one calf. The first cow died late in September, two cows on October 6, and the calf last Saturday. Dr. Ward made a post-mortem examination of the calf, and found that it died of contagious pleuro-pneumonia. The carcasses of all the animals, which were found lying on the surface of the ground, were ordered to be immediately buried four feet deep in quicklime. Among Mr. Lutz's other stock, consisting of eight cows, one bull and a heifer, Dr. Ward found the bull and two cows showing premonitory symptons of pleuro-pneumonia. He ordered the herd to be isolated and placed in strict quarantine. Mr. Lutz admitted to Dr. Ward that he bought a cow from a Baltimore stock dealer July 21. Mr. Lutz's cattle were in creditable condition and well cared for. He said he would have reported the cases if he had known the law. Dr. Ward visited the estate of Mr. John S. Gittings, and found that 48 head of cattle had been removed to Long Green for safety. No disease exists among the stock on the place. Dr. Ward wrote to Governor Hamilton, giving the result of his investigations and recommending the slaughter of Mr. Lutz's herd in order to stamp out the disease at once. The Docter thinks no alarm need be felt for stock, but will continue his investigations until the disease disappear from the neighborhood."

And the Towson *Journal*, of October 27, said:

"We learn from a reliable source, that pleuro-pneumonia is raging terribly among cattle in Long Green Valley, and that neighborhood. The diseased cattle are permitted to roam at will, thereby communicating the fatal infection. It is a case for the immediate attention of the State Veternary Surgeon."

Minerals, etc., Tested.

SAMPLES OF MARL FROM SUBSCRIBER IN QUEEN ANNE'S CO., MD.—No. 1 calcareous marl contains about 1% phosphoric acid. No. 2 shell marl contains no phosphoric acid. After being coarsely ground, both are well adapted for fertilizing purposes or composting with stable manure. No. 1 is, however, preferable, owing to the presence of phosphoric acid.

SAMPLE OF ROCKY SOIL FROM BALTIMORE COUNTY.—The sample is a mixture of mica and silica principally and does not contain anything of value. To satisfy the sender, we tested especially for gold and copper, but found none.

SAMPLE OF WELL WATER FROM CAROLINE CO., MD.—The sample of water does not contain anything injurious for domestic purposes, but it is charged to considerable extent with iron (carbonate) in solution, which, in contact with the atmosphere, is procipitated as basic oxide, forming either a scum or sediment. LEHMAN & MAGER.

Mr. Samuel M. Shoemaker's Jerseys.

We recently had the opportunity of inspecting the new addition to the Burnside Park Herd, the beautiful cow Saragossa, whose purchase by Mr. Shoemaker at T. S. Cooper's sale for $4,800 was noticed in our last issue. She is as handsome an animal as can be seen, as all judges of these cattle testify. She has a splendid pedigree, her great-grand dam being the famous "Regina," who has a reputed butter record of over 20 lbs. of butter per week and being the fountain head of one of the most noted Island strains. Saragossa was bred by F. Ozouf, Granville; she is a representative of the best type of the Jerseys, fine in every feature almost to delicacy, with handsomely developed udder, soft when empty as a chamois skin, enormous milk veins, rich, mellow-handling skin, and deep waxy horns. In color she is fawn, with a little white, with long thin tail and full switch. Her frame approximates the typical wedge-shape assigned to dairy cows. She was winner of second prize over the Island, in aged cow-class, in 1883. In Mr. Jonathan Smith's report of the Royal Show to the *Country Gentleman*, he says of Saragossa: "This is a far better cow in my opinion, and could give Linda (the first prize cow) points all round, except in one particular—Linda has a better rump. But in the main points of udder, fineness of withers and neck, and dairy lines generally, Saragossa scores every time, and should have won with 'lots to spare.' There is nothing better on the Island." Captain Philip Le Brocq also writes to the *Breeder's Gazette*: "Saragossa was a credit to any breeder; she is a true American type of a dairy cow and in putting her second, she had scarcely the place she deserved. She is due to calve February 5, 1884 by Count Cicero, F. 398 H. C., a son of Cicero P, 266 H. C. Of the other animals in Mr. Shoemaker's herd, St. Clementaise took the laurels at New York State Fair this year, and having previously won the first prize over the Island for richest milk, and when 3 years old made in one week 15 lbs. 12 oz. butter. She is a grand old fashioned cow and, as Mr. T. L. Cooper says of her, "certainly one of the greatest milking machines that was ever sold from Linden Grove."

One of the handsomest cows in the herd, however is Khedive's Primrose. She was regarded by Mr. Dorey, her breeder, as the best and most promising young cow that he had ever owned and probably the best young cow that was ever bred on the Island. Mr. J. Smith says of her:

"Royal Jersey Agricultural Show: Heifers in milk; 28 entries. *First prize*, Khedive's Primrose, owned by T. C. Dorey; worthy of her owner and of her position; the best animal in the show-yard and undoubted 'belle of the ball;' no faint praise, but when she was within an ace of winning the champion cup, and assuming at two years old the proud position of best cow in the Island, you may judge how well it is deserved. With the single exception of youth, oh, priceless fault! she is perfect. Age will give a grander development to her frame, and this was all the allowance she needed as she stood beside the choicest and ripest matrons of our Island in the champion ring. Her udder needed no such allowance; in shape, in quality and magnificent proportions it challenged comparison with the best. She is by Pilot, son of Khedive and grand-son of Coomassie, out of Primrose. In color she is reddish fawn; her escutcheon is courbelique with the much valued epijonctify mark under the vulva." It is worth recording that Mr. Ricklefsen, Mr. Shoemaker's farm manager, was offered $3,000 for her calf, due December 6, no matter of which sex, but refused it.

Besides her is the graceful form of Oxford Kate with the exquisitely shaped, beautiful head which she carries so proudly, as if conscious of the honors that have been showered upon her already. She took the second prize at New York State Fair this year; first prize at New Jersey Fair last year and the first prize in class for 2 year old heifers at the Royal Jersey Show, 1881. She is another of T. L. Cooper's importations. She is by Pilot out of Verclut and was bred by F. Le Brocq, St. Peters, of Jersey.

Another grand ahimal is Princess 2d, with her beautiful soft yellow skin and splendid selvedge escutcheon as well as very large and well-shaped udder. She is granddaughter of Coomassie, by Khedive out of Primrose. She was in the herd which took the sweepstakes at the New Jersey State Fair last year.

Queen of the Farm is also worth mentioning as a fine old cow as well for her points as her milking qualities. She is of the Foundation Stock on the Island. Her last year's heifer First Butterfly (also in Mr. Shoemaker's herd) won the first prize as best heifer at the New York State Fair this year.

There are, of courre, a number of cows yet to be named, but those already mentioned may suffice to show that it will be difficult to find so many animals of such superior breeding and quality together in one herd.

Only a short notice about the bulls. There are four bulls at Burnside at present, "Forget-me-Not," "Hannibal Duke," "Primrose" and "Southern Prince." Forget-me-Not is of "Farmer's Glory" blood.

In "Hannibal Duke" there is introduced Eurotas blood into the herd. Eurotas is the dam of the famous Duke of Darlington and Hannibal Duke is by Duke of Darlington out of Anna of Mountain Side. He is long bodied, square, wide hipped and loined, has a flandrine escutcheon; an exquisite handler, with skin yellow and rich.

Burnside is a son of "Forget-me-Not," out of Owandah. He has his sire's good qualities and won the first prize in his class at the New York State Fair this year.

Southern Prince is also a son of Forget-me-Not out of Oxford Kate. He is a very promising young bull with as fine an escutcheon as his dam and is by the combination of Farmer's Glory and Coomassie blood, no doubt destined to become famous in the near future.

Fair at Pimlico.

As we go to press there is a fine display, especially of cattle, at Pimlico, "combined with a first-class racing program under the direction of the Maryland Jockey Club." There is also quite a good exhibition of agricultural machinery. So far as published the awards on Jersey cattle, in which alone there was any competition, were awarded as follows:

Home Bred Jerseys.—Best bull, three years old, R. S. Woolston; second do., Andrew J. Banks. Best bull, two years old, Frederick VonKapff; second do., John E. Phillips. Best bull, one year old, Samuel M. Shoemaker; second do., John Gill. Best bull calf, John W. Garrett; second do., Samuel M. Shoemaker. Best cow, three years old, Watts & Seth; second do, Andrew J. Banks. Best heifer, two years old, John E. Phillips; second do., Frederick VonKapff. Best heifer, one year old, Andrew J. Banks; second do., Watts & Seth. Best heifer calf, Samuel M. Shoemaker; second do., Andrew J. Banks. Best herd—one bull and four cows, Samuel M. Shoemaker; second do., John Gill.

Imported Jerseys.—Best bull, three years old, Samuel M. Shoemaker. Best bull, two years old, John E. Phillips. Best bull calf, Wm. H. West; second, do., do., Wm. H. West. Best cow, three years old, S. M. Shoemaker; second to same. Best heifer, two years old, Wm. H. West; second do., Watts & Seth. Best heifer, one year old, John E. Phillips; second do., Andrew J. Banks. Best heifer calf, John E. Phillips; second do., Andrew J. Banks.

Mr. F. Brown showed Devons; Judge Stump, of Cecil, Shorthorns; Mr. E. G. Merryman, Herefords; Dr. F. W. Patterson, Dutch Frisians; Mr. G. S. Watts, Guernseys; Mr. C. Lyon Rogers, Holsteins.

Horses were shown by Messrs. John W. Garrett, Jesse Tyson, W. Fell Johnson, E. G. Merryman and others; Berkshires by Mr. Fulford, and sheep by Messrs. Metcalf and Hicks, of Chester Co., Pa.

AGRICULTURE IN THE SOUTH.

Progress in Agriculture—Is there any Room for Further Improvement?

By Th. Pollard,
Ex-Commissioner of Agriculture of Virginia.

Another evidence, in addition to what was offered on this subject in our last, that there is room for further improvement in agriculture is the fact that so much of our land is lying poor and unproductive. We still have left a great deal of land uncleared, but there is enough cleared for the present if it was improved and made productive. The day for "the clearing up and wearing out" process has passed; the farmers cannot now command the labor for this purpose, and if they could, it is cheaper to improve an acre of cleared land than to clear it. The expense of clearing is heavy even on moderately timbered land, while, if the plan suggested in our last is adopted, an acre of land may be fertilized with South Carolina phosphate and kainit and peas, and then set in clover certainly for not more than $10 per acre, and, under favorable circumstances, for less; where the land has been much worked down, it may require repetition of the fertilizer, though in less quantity, and another seeding of peas and clover before a stand of the latter is obtained.

Another evidence that there is room for further improvement in the great interest we are discussing, is that here and there really good and advanced farmers are found, who are making money and setting an example to their neighbors in the improvement and proper cultivation of their lands. The success and example of these few shows there is a wide gap to fill up between them and the average farmer, and there is also a gap between the average farmer and the most indifferent. These examples show there is much room for improvement in farming. Suppose all the farms in the country were up to the condition of the best ones, what would be the great advancement in agriculture and the happy circumstances surrounding our farmers? It may be said that these advanced farmers have been aided by capital in their success. In some cases they have, in others have not been, and probably the latter predominate. We have seen many instances of farmers bringing their farms to a good and profitable productive state with but little means to start with. We remember a striking instance of a farm in Louisa county, Virginia; a Confederate soldier who came out of the war with one arm, and a poor farm, without capital, without stock and without farming utensils. He went to work with a will and a determination to succeed, and sells about $2,500 worth of tobacco and a profitable crop of wheat yearly. In the same county, there are negroes who, by their skill and industry, get the highest price for their tobacco of any farmers in the county, and some of them have purchased farms they first rented. In the investigation before a Congressional committee, some years since, into the causes of the exodus of negroes from North Carolina to Kansas, it was testified by some four or five negroes that they had first leased farms, since the war, and then bought them by the proceeds they had saved; the farms generally costing $4,000 to $5,000.

Even among the best farmers there is room for improvement, for farming is far from being an exact science. The most intelligent and scientific farmers are aware of this, and are constantly endeavoring to increase and extend the knowledge of their business and to arrive at exact conclusions. While science has done much for agriculture, as we have before intimated, experiments and experience have also done much and are destined to do much more. Every farmer should experiment for himself, even though it may be in a small way, if he expects to work on a sure basis and improve his system of farming. On this point, Dr. Loring, our able Commissioner of Agriculture, in a late address, says: "The development of agriculture thus far has been largely in the hands of those who have been practically engaged in it. To the farmers themselves we owe the sound foundations of the industry * * *. In the practical investigations from which new knowledge can be derived, we can always rely upon this great class of experts for methods and principles which can be carried on to new economies and improvements. We can always learn of them. He who has grown 2 tons of hay to the acre and 100 bushels of corn and 35 bushels of wheat and great root crops, and has successfully cultivated an orchard or a vineyard, must inevitably be a good teacher, and we can always learn of him. When we step beyond this into the regions of science, we must learn of those who are well informed in scientific investigations as this successful farmer is in his practice. He is a poor farmer who raises poor crops and selects poor animals and lays down a poor system, and he is a poor investigator who labors to defend a theory and proclaims an irrelevant conclusion, as the result of an accumulation of feeble facts. * * To him who cultivates the soil, sound investigation and well-directed science are of the utmost importance. The manufacturer has found that only the best designer can make his goods attractive; only the best chemist can prepare his dyes; only the best engineer can organize the force of his mill, and only the best methods which diligence, skill and ingenuity can devise are adaped to his purpose. A pretender is as dangerous to him as fire and flood and a falling market." The farmers then must learn what teachers to follow, that they may be properly instructed as to what systems of improvement and cultivation of their farms they should adopt. To accomplish this they must watch the plans and operations of the best farmers in their reach and read agricultural works and journals. A great many excellent works on agriculture and numerous well-conducted journals on this subject are now being published, but it is astonishing what small proportion of the aggregate of farmers read them. It seems hard to conquer and overcome the prejudice against "book farming," as the unreflecting call it. If we can get the experience and instruction of the best farmers by their writings, why not heed them as well as if expressed to us orally and face to face. A writer is supposed to take more pains to consult accuracy in written communications to farmers than he would in talking to them off-hand and sometimes excitedly and without due reflection. He writes calmly and with due consideration of his subject, knowing his written words have to stand and are to be subject to the criticism of every reader who peruses them, and that there can be no retraction of statements made and conclusions arrived at. No farmer should be without some standard works on agriculture if obtainable, and especially without some good agricultural journal. Many excellent agricultural journals are now published at very cheap rates, and there is no excuse for any farmer failing to take one or more of them. One number will frequently pay for the whole year's subscription. But many farmers think they know enough and say their own experience is sufficient to guide them. I have been told this by farmers, with, at the same time, a great expression of disgust for "book farming." If they really have this experience, how much has it cost them to obtain it? Many a dollar lost and much time lost in arriving at conclusions; bad systems have been adopted, only to be corrected by years of bitter experience, and in some cases not corrected at all, but the "old ruts" have become a second nature, and, in many instances, the farmer has become a failure and his farm a standing evidence of his want of enlightened and progressive agriculture, results which might have been averted by consulting the written experience of others.

The Grange.

National Lecturer's Communication.

SUBJECT FOR SUBORDINATE GRANGES FOR NOVEMBER.

Question—How does tariff affect the farmers' interest?

Suggestions—Tariff, whether protective or for revenue, adds to the cost of goods—the consumer pays the tariff. Iron, woolen, cotton and other goods that are largely consumed by farmers pay a higher tariff than those that enter into general consumption by other classes. This discrimination unequalizes governmental burdens, and agriculture is made to bear an unjust proportion. Any system of taxation that discriminates against any class or interest is an error and should speedily be corrected.

Free-trade (so-called) would remove the tariff tax, and manufactured goods could be sold at rates "less the tariff," thereby saving in purchases millions of dollars annually to the farmers. But the merits of the tariff question do not end here, and its consideration must be continued with like candor. If the abolition of tariff stops the manufacture of any portion of the goods we need, then we turn idle a portion of the labor, one of the productive elements of wealth, and we then export millions of our money annually to foreign countries to secure the supplies that should be manufactured at home, and distributed among our own people. Present tariff is used to protect capital more than labor, but this is the fault of the law that creates the tariff. Tariff for protection should be made by law, to protect labor and encourage home industry. Tariff for revenue should be equitably distributed. Extremes on either side of this question is an error, and are too often resorted to for personal gain and partisan advantages. This question can and should be regulated, and he who solves the "tariff problem for the best interests of the American people, with justice to all classes and interests," will, indeed, be the "statesman of the present age" and of the highest rank.

Does the Grange Meet the Farmer's Need?

Messrs. Editors American Farmer:

Your paper contained, some time ago, an article on the "Farmer's Situation," by Wm. Holman, of Cumberland county, Virginia, so comprehensive and so patriotic, that it would deserve to be made the farmer's rule of action, were it not for a few statements to which I desire to call your and his attention. His premises and conclusions will bear repetition. They are:

1. This is a people's government, and the people at large should control it.

2. Designing and unscrupulous politicians have secured control of public affairs and use their power in the interest of individuals and corporations and monopolies and not for the people, and hence the results of the farmer's toil are unjustly distributed.

3. The farmers should work together politically, and select for their own class leaders of ability and integrity to represent them in the public offices.

4. There should be a rigid system of co-operation and organization among farmers, with local societies and State and national organizations, growing out of and containing the representatives of the local societies.

5. These societies should discuss all great national questions, and whilst they need not descend to every depth of *partisan* politics, public affairs should be thoroughly investigated, in order that farmers might be fully qualified both to vote and occupy offices, properly.

To the above declarations, farmers can make no objections; these sentiments should be presented to and entertained by farmers over all the land. If our ranks were full of citizens who believe these and could express them as eloquently and forcibly as Mr. H. has, the farmer would soon be the self-elevated director of public affairs.

But Mr. H. continues,—and to these declarations we desire to direct inquiry and the re-consideration of Mr. H. himself: "It was at first supposed that the Grange would meet this want, but it has failed to do so in that—

1. It is a secret society. "An organization so composed," Mr. H. says, "is fatally defective."

2. It has emptied the Grange rooms by a tedious ritual.

3. It does not permit the discussion of the public questions in which the farmer is most interested.

That you may see whether the above three propositions cover the whole ground of the objections, I give the language below in full:

"The Grange has turned out to be a failure in a great measure. Its organization was fatally defective in several particulars; the first was in making it a secret society, with a long ritual that soon wearied out everybody and caused the Grange rooms to be emptied; the second was in excluding from the Grange rooms all political topics, whereas these constituted the main objects, requiring co-operative action; we are not alluding to party questions, but to great questions of legislation and public policy, bearing upon the agricultural interest."

Now let us go on with the trial of the Grange in the order given in the indictment.

1. It is a secret society.

So are the Masons, the Odd Fellows, the Hibernians, the Heptasophs, the Knights of Pythias, the Good Templars, the German Brethren and a hundred other combinations of American citizens and workmen, like the Hackmen's Union, the Shipbuilders' Union, the Brotherhood of Engineers, the Sons of Crispin and the National Hat Finishers. So is every trade, corporation and firm, every church and every family a secret body, and so is every individual a secret party, each and all containing in its operations an element of secrecy, a hand in the dark, some of whose operations are unpublished to the world, and whose operations are wholly or in part designed to be kept secret and which must be kept secret, or fail.

From the time of George Washington, and before, and including him, workmen, capitalists, patriots, saints and martyrs have attended secret conclave, council and conference, and the new births of these private communions have electrified and elevated the world. Scripture commands secrecy in keeping even "one hand ignorant of the doings of the other," and in "displaying the wisdom of the serpent and the harmlessness of the dove;" beasts of cave and mountain and jungle, and birds of forest and air, in obedience to the revelation of the great teacher, nature, hide their nests, their young and themselves in the secret places; every ray of light that ever leaped from the hand of nature and illuminated the universe, has a secret origin; the gaudy banners of morning and the sacred garments of vesper time and night, are rustled by an agent whose secret comings and doings are subjects of Scripture comment; and in every instance this feature of secrecy is an element of strength, a sacred mandate in the litany of revelation.

Take the question of agricultural organization before us; the page containing the history of the use of agricultural clubs and associations, previous to the advent of the Grange, contains also their obituary. None know better than old veterans in this work of agricultural organization, the great lack of cohesion in a farmer's club, built soberly on the foundation of vocational and intellectual work and sympathy. For fifty years, feeling the need of a common local and national bond, the aspirations and labors of farmers have been groping and reaching out

after such an organization as Mr. H. describes, with what result? Failure in every instance after, and notwithstanding vigorous and protracted effort. Now, in contrast to this picture, look at the hundreds of meetings of State Granges, covering nearly a score of years, and that grand gathering of the choice intellects of American agriculture, the regularly recurring sessions of the National Grange of the Order of the Patrons of Husbandry,—due (I think we are justified in saying) largely—I will not say primarily—to this peculiar element of strength, the secret bond that tells you here at least are friends; outside are enemies. It is like the ringing of your own native tongue by a stranger amid the thunders of alpine passes; the tie of a common nationality, a common religion, a common hope, a common aim and the same glorious destiny and victory, and to attempt to analyze and explain this feeling of congeniality and security, born of this secret tie, is to go down to the depths of human nature and touch the secret springs of the origin of being; *results* in our case, demand its employment, and, although instances of its improper use may be given, the same argument can be urged against water, wine and every other good gift vouchsafed by heaven to man. We turn to the second item in the charge:

2. It has emptied the Grange rooms by a long ritual.

In some places Granges have died and in others the membership has been diminished, but when we look at the many intellectual features of Grange work, at the necessity for strong brain power, at certain stages of the work, the absence of this faculty would interfere with Grange progress. To conduct a Grange properly and successfully, requires a variety of agents in combination; strong common sense, culture, conciliation and other virtues, musical and elocutionary talent, tact, lady membership, love of social intercourse, suitable social conditions, the stimulus of young members, a proper meeting place at a proper time and in a comfortable temperature, and other things, and the absence of enough of these desirable conditions would be fatal to a Grange after its organization. Again re-action is apt to set in after a rush of numbers; this follows all periods of political, religious or social excitement. Two churches near me have been turned, one into a hay barrack, the other into a granary, but it is not urged in explanation that the ritual of the church is defective or tedious; on the contrary, new churches have been built in more suitable localities; the church is thriving, the people are industrious, moral and prosperous.

I remarked to the Worthy Overseer in my own Grange that the number of new applications in our Grange would keep us initiating all the fall, without extra sessions, to perform this work. "Well," he replied, "that's as pleasant as anything," and this appears to express much of Grange sentiment on the question.

Why is it, that in sections where the people are most intelligent—take Montgomery county as a representative locality—the Grange is most prosperous and the "long ritual" is not "emptying the Grange rooms?" What intelligent church membership ever complained of the "length" of its ritual; look at the length of the Jewish, Catholic, Episcopalian, Masonic and Odd Fellows' ritual, and the devotional exercises—sometimes night after night for weeks—of other denominations; do we hear any complaint of their length? And I submit to such a fair and candid mind as Mr. Holman himself, that if we *in* the ranks, if we the principal sufferers, if such there be from the "length" of the code, and guide and anchor of our Order, offer no objection or complaint to its length, this objection or complaint loses its force when it comes from one not a member. Over each Grange room in the land, North, South, East and West, there shineth, as the representative of our Creed of Honor, our sublime ritual, a white star of undying beauty, and, in times to come as in times past, its silvery splendor shall light many a toiler on a rough agricultural sea into the peaceful harbor of our enduring organization. The remaining count in the charge is:

3. It excludes all political questions of legislation and public policy; the main subject requiring co-operative action.

The exact reverse of this proposition is so plainly demonstrable that I am led to believe Mr. H.'s error on this point has arisen from that clause in our national constitution which 'prohibits the discussion in the Grange of all political questions," but this has been construed by the highest court in the Order to mean and refer to party-political subjects. That sufficient latitude is given for the discussion of all questions of legislation and public policy, I submit in detail:

1st. Brighton (Md.) Grange, in the early days of the currency agitation, six or eight years ago, fully discussed the question of national finances, arrived at a conclusion and sent resolutions on the subject to the State Grange.

2d. Ashton (Md.) Grange took the same course and resolutions on the same subject went up to the National Grange from the Maryland State Grange.

3d. Brighton Grange has repeatedly discussed the "Tariff" question and the "Corporation and Monopoly" questions.

4th. Dayton Grange has had the same question, "Tariff," under discussion, and it is now on its docket.

5th. Montgomery County Grange, composed of representatives of eight or nine subgranges, will discuss the question at its October meeting.

6th. Worthy National Lecturer Eshbaugh issued a circular in the spring, bringing this same "Tariff" question before all the subgranges in the country. He has just issued another circular specifying the "Tariff" question as the regular subject for discussion by all the sub-granges in the country for the month of November, 1883.

7th. The National Lecturer has called the attention of the Granges to the questions of "Transportation," "Corporations" and "Monopolies," asking them to investigate them from the farmer's standpoint.

8th. A circular on the "Corporation" and "Tariff" questions has been distributed through the State Master's office.

9th. Brighton Grange has sent a circular on "Partisan Politics" to every sub-grange in the State; this circular was the work of a committee of the Grange appointed for the purpose.

10th. The National Grange has recommended for discussion "all questions relating to the tariff;" Journal of Proceedings, 1882, p. 121.

11th. The discussion of all questions of political economy is admissable in the Grange and is urged by W. State Master Devries; he refers to "combinations around us," the "greed of monopolies," our "co-operative principles" and the "need of the enlightenment of our people on questions of political economy;" he also, with emphasis, counsels the use of the "heaven-ordained privilege, the ballot," to give due strength to the demand of the American farmer for justice. Address, December 12, 1882, before Maryland State Grange. In same address he refers to the "Patent Right" bill and the "Regan Transportation" bill as subjects requiring Grange action.

12th. The Master of the National Grange discusses the "Patent Laws," the "Transportation" question and the subject of "Education," and concludes with a burst of eloquence that ought to satisfy every farmer that the proper use and direction of the Order will make it the farmer's key to open wide the doors of every avenue of legitimate exertion. Address, p. 12, Journal of Proceedings, 1882.

13th. And the queston of independent political action and not slavish adherence to any party was put prominently before the National Grange and adopted as the sense of that body. Journal of Proceedings, p. 86, 1882.

14th. The Montgomery County Grange, representing all the Sub-Granges in the county, and composed of sixty-four voting members, passed resolutions, introduced by Bro. Moore, on the "Local Option" question, then a current political topic, endorsing the measure, which was subsequently endorsed by the people at the polls by 1,500 majority.

15th. Howard County Grange, similarly constituted, discussed the same question, when it was a *current political topic*, took similar action upon it, and its endorsement of the project was ratified by the people at the polls by a majority of nearly 400.

Have I not shown, even to Mr. H. himself, the *elasticity*, comprehensiveness of the Order on this point? Instead of excluding the the vital questions, those most important to the farmer, it has discussed them all, with one exception, and that will be presented at the next session of the Maryland State Grange, with a fluttering of banners of the gathered host and an uplifting of Maryland voices that shall reach from her hill-boundaries to the sea.

So that the door stands *wide open* under the above precedents for the admission of every subject bearing on the farmer's welfare, which ought to be discussed, and the record shows that he is making good use of the opportunities thus afforded.

DAWSON LAWRENCE.
Dayton Grange, Md.

Home Department.

Consequences of False Attitudes.

Messrs. Editors American Farmer:

There is an excellent article on "False Attitudes" given in the second volume of the *Journal of Health* for 1883, which applies to various occupations, and especially to ladies and students. The writer's remarks, we believe, were suggested and perhaps quoted from the writings of Surgeon Duffin.

The false postures and attitudes taken by young persons at school, or when engaged in any particular trade or labor, often become a cause of distorted spine and other deformities—a state to be deplored in all, but more especially pitiable in the female sex. We think it incumbent on parents, guardians and instructors to pay special attention to the habits in this respect of those under their charge.

We cannot here quote nor will it be expected that we should give a description of the anatomy of the back and the column of cylindrical bones, called *vertebra*, piled one upon another, and extended from the large solid bones that support the body when sitting erect, to the lowest part of the head, but shall proceed with a few remarks on the bad consequences resulting from distortion by habit of this main pillar or structure of the human frame.

We will be excused for citing our own case. We were, in our youthful days, a mechanic, and much of our time was employed with *bench planes*, this necessitated an inclination or bending of the body forward, as also did the use of the *hand saw and augers*. In time the habit became somewhat fixed, and we assumed, in some degree, the *Grecian stoop*, which was practiced years ago by some ladies as a clever fashion, but which was always ridiculous in our eyes. This has continued with us up to old age, and old age does not remove it. We have in our mind other cases. We know a person who was a very young student at the University of Virginia. He was very studious and was at his books the greater part of his time. Thus employed a leaning position was unfortunately assumed, and, whilst at his table or desk, this attitude was seldom changed. The result was, the side to which the body inclined readily yielded and got out of its natural position, and the muscular contraction on one side and the strain on the other became permanent or caused a permanent inclination, and the true vertical position was never regained. This position depressed the ribs and shoulder on one side and elevated them on the other, causing a rather tilting, one-sided walk. This was not all the difficulty. The shoe and boot makers gained by this defect, for these would never wear equal, and the boot on the depressed side would always wear *one-sided*, and finally run down or turn over, whilst the other was in fair order. Hence any undue inclination to either side during youth, if frequent, constant and protracted, will cause this defect. The professors of a University have not time to see to all the habits of those under their charge whilst engaged in their studies, but the librarian or some subordinate officer of the institution or school should see that no bad habits are formed or induced by false attitudes, extraneous circumstances, or from any cause; and any evil of this nature should be remedied at once. A word of advice would be sufficient. The student, whilst reading, should rather incline the body backward than otherwise.

In European countries much field and garden work is done with the hoe, and the laborers use *short handled hoes*; this necessitates a very stooping position, and as this is their daily work the habit confirms and retains their bodies to this position; and when they become old men they go *half bent*.

Parents would do well to see that nurses do not carry infants altogether on one arm. This is wrong and injurious in more ways than one. If carried on the left side and arm the child is compelled to use the left arm and hand to receive and hold any thing, causing the baby to be left-handed and awkward.

J. FITZ.
Keswick, Albemarle Co., Va.

The Gospel of Kindness.

The Gospel of Kindness finds too small a space in the theology of to-day. It is gradually winning its way, however, and it is hoped that it will be accorded more prominence. It does not belong to the Sabbath and pulpit alone. It is in the lives of the people, in their week-day conversation and walk, that the demand for it is most urgent. The word fitly spoken, the smile of encouragement, the helping hand extended when the feet slip or stray in dangerous paths, are the influences which count for something in the battle of life. A single kind word has more than once turned the current of an individual, neutralized and destroyed evil examples, and founded a nobility of character which has been proof against the shocks of adversity and sin. Our lives are made up of little things, and they are determined for good or ill by the most trivial events. Amid them all, the man lives not who fails to trace as the keystone of his success an incident of seemingly little moment, without which the fabric of his life would have been incomplete.

We need to be reminded often of the grandeur of things; of our duty to our fellows in the performance of kind acts; of the fact that one word uttered at the right time and in the right place may send a ripple across the bosom of humanity which shall overpass a continent and affect the world for all time to come. Line upon line, and precept upon precept, may be taught to child and adult

alike, and in the end it may be found that a single word uttered in kindness will establish, perpetuate and save. The souls of men are attuned by a master hand. To strike the cords harshly is to shatter and destroy. To touch them in gentleness is to bring forth a perfect rhythm of goodness, purity and love. We ought never to forget this, and yet in our daily association with each other we are fearfully lax in this direction.—*Selected.*

Preserving Shoe Leather.

The London *Field Says:* There is one simple article which will render any decently made boot thoroughly impervious. It is nothing more nor less than cold-drawn castor-oil "pure and simple." It is best applied before a moderate fire. The boots to-day dressed should be quite clean and dry; and especial care should be given to the welt and and the tongues, and their stitching to the upper leathers, I generally begin by pouring the oil from the bottle all around the welt, so that the angle between the sole and upper leather is quite filled with oil, and then proceed all over the boot, including the edges of the soles, rubbing it in with the hand. When one is done, have a turn at the other, and so alternately till you have got in about a tablespoonful and a-half to each boot. The tongues, being thinner leather, should be quite saturated. Subsequent dressings will not require so much oil. I have never found anything to touch this as a waterproof dressing; the gelatinous oil seems to effectually stop every poor in the leather. There is another advantage for those who are natty in such matters; the boots will soon take a good (common blacking) polish-so much so, that a man may, if he likes, water proof his ordinary walking-boots for bad weather without spoiling their appearance. With a common walking-boot of ordinary thickness, apply the oil all over the sole. I wear boots so treated, shooting, over thick woolen socks, for from eight to twelve hours a day or more, without feeling the slightest inconvenience in any way; but they have the chilly feel inseparable from all boots that are oiled in any way.

In our new advertisements in last issue will be found a remarkable exhibit of the results of Fourteen Tontine investment policies in the sterling old New York Life Insurance Company. Glancing over this statement we find the average cost on these policies the past ten years to have been only $2.89 per $1,000 insurance per annum, a cheapness heretofore unheard of by us. No better commentary can be found upon the conservative management of this thoroughly reliable institution than above results; attesting the wisdom, which after meeting every honest claim upon its exchequer the past thirty-eight years and paying handsome annual dividends in reduction to its premiums has managed its vast business so prudently and economically as to accumulate from interest receipts over and above all mortality costs and expenses more than ten millions dollars surplus. We unhesitatingly recommend our patrons to familiarize themselves with the plans of the New York Life before insuring elsewhere.

Ayer's Pills are effectual in a wide range of diseases which arise from disorders of the stomach and digestive organs. They are a convenient remedy to have always at hand. They are sugar coated, easy to take, effective to operate, sure to bring relief and cure.

The hair is frequently rendered prematurely gray by care, grief, delicate health, lowness of spirits, or a depressed tone of the vital powers. The use of Hall's Vegetable Sicilian Hair Renewer, will restore its youthful color and beauty.

Ayer's Cherry Pectoral wonderfully increases the power and flexibility of the voice, enabling public speakers to speak clearly and without fatigue. If people who are troubled with colds would take Ayer's Cherry Pectoral before going to church or places of entertainment, they would avoid coughing, greatly to the comfort of both hearers and speakers.

BALTIMORE, MD., Aug. 24th, 1880.

I have been on the Police force for 9 years and it formerly cost me annually about one hundred dollars for Dr. bills and medicine, but have for the past two or three years been using J. M. Laroque's Anti-bilious Bitters, and say positively that it is the best medicine for Biliousness and Dyspepsia I ever saw or tried, and it seems especially adapted to Policemen and all persons who are much exposed to the weather. I never take any other medicine, and always keep it in the house ready for use. JOHN POWERS, Middle District.

Baltimore Markets—Nov. 1.

Wheat.—The market for Southern Wheat is quiet and easy, with moderate inquiry and fair supply. Inferior and weevil-cut parcels sold at $1@1 04. Good to choice samples brought $1.05@1.06 for Fultz, and $1.08@1.14 for longberry. A lot of choice mixed sold at $1.11. Western Wheat ruled fairly active and a shade higher, closing firm at about the best prices. The closing quotations were as follows: Spot No. 2, $1.04¾@1 05; November, $1.04¾@1.05; December, $1 07⅛@1.07⅜; and January, $1.10⅛@$1.10⅝.

Flour.—Stocks are moderate and under easy control. The market is quiet but steady, with small business doing. We quote as follows: Howard street and Western Super, $3 00@3.50; do. Extra, $3.75@4.75; do. family, $5 00@5.75; City Mills Super, $3.00@3.75; do. Extra, $4.00@4.75; do. (Rio Brands) Extra, $5 75@6 00; Baltimore Winter Wheat Patent $7; do. High-grade Family, $6.50; do. Second-grade Extra, $6 25; do. Third-grade Extra, $6; Fine, $2.75@3; Rye Flour, $3.75@4; Corn Meal ₹ 100 lbs, $1.35.

Corn.—The offering of Southern Corn is uncertain, and the market is dull and irregular. New white sold at 42@45 cts. for green and damp, 50@55 cts. for fair to good, and old do. at 60@62 cts. for good to prime; yellow is quoted nominally at 56 cts. for prime old. The market for Western Corn ruled quiet but steady. The closing prices were: 55⅜@56 cts. for spot, 55⅞@56 cts. for November, 55½@56 cts. or year, and 55@55¼ cts. for January.

Provisions.—A firmer feeling is reported at speculative points. There is a fairly active local demand for job lots, and prices are unchanged. Packed lots from store are quoted as follows: Bulk shoulders, 6½ cts.; clear-rib sides, 7¾ cts; Bacon shoulders, 7¾ cts; clear-rib sides, 8¾ cts. Hams, sugar-cured, 16@17 cts. Refined Lard, in tierces, 9¾ cts. Mess Pork, new heavy, $12 75 ₹ bbl.

Butter.—The market is firm under a quick demand for choice table grades, which are scarce. Inferior stock is dull and nominal. We quote: Choice New York State at 23@25 cts.; fresh Western choice at 18@20 cts.; do. good to prime at 14@16 cts., and near-by receipts at 16@20 cts ₹ lb.

Eggs.—The market is firm under moderate receipts and active demand at 26@27 cts. ₹ dozen for fresh Western, and 28@29 cts. for choice near-by.

Cotton.—There is only a moderate inquiry to supply urgent needs of local spinners, and the market is quiet but steady, as there is no stock pressing. We quote new crop as follows: Middling at 10⅜@10¾ cts.; low middling at 10¼ cts., and good ordinary at 9¾ cts.

Live Stock—*Beef Cattle.* The quality of the offerings to-day average quite as good as it did last week. We quote as follows: Very best on sale, 5¾@5¾ cts.; that generally rated first quality, 4¾@5¼ cts.; medium or good fair quality, 3¾@4 cts; ordinary thin Steers, Oxen and Cows, 3@3¾ cts; Extreme range of prices, 3@5¾ cts.; most sales were from 4@5¾ cts.

Swine.—The number of the receipts is nearly the same as last week, and the quality of the offering shows little or no variation since then. We quote: Hogs at 6¼@6¾ cts, and extra, 7 cts.

Sheep and Lambs.—The quality of the offerings is reported in all the yards as not as good as last week, and trade very slow. We quote: Butcher Sheep at 3@5 cts.; few selling at either extreme; Lambs, 4@6 cts.; stock ewes, $2@3.50 per head, and wethers, 4@4¼ cts. per lb.

Tobacco.—*Leaf*—Transactions in Maryland have been restricted by small receipts and insufficient stocks of medium and better grades, for which a strong demand continues. We quote: Maryland inferior and frosted, $2@3; do. sound common, $3 50@$5; good do $5.50@6 50; do. Middling, $7 00@8 50; do good fine red, $8.50@$11; do. fancy, $12@$14; upper country, $4.00@$15 00; do. ground leaf, $3@7. *Ohio*—Sales of Ohio amount to about 500 hhds., principally for home consumption, at full prices. We quote inferior to good common, $4@6; greenish and brown, $6@7.50; medium to fine red $7 50@10; common to medium spangled, $7@10; fine spangled and yellow, $11@16; air-cured common, $4@6; air-cured medium to fine, $7@16.

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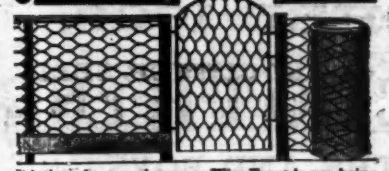

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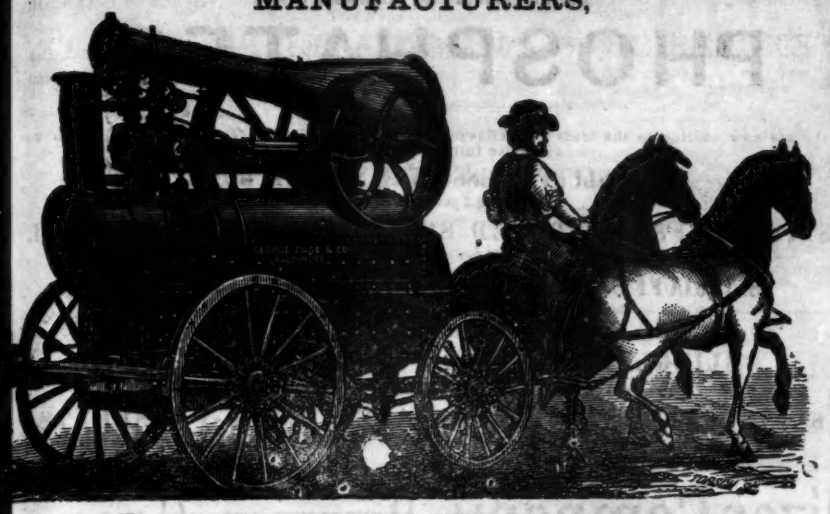

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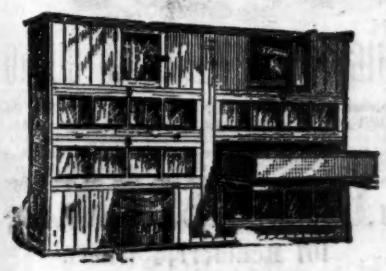

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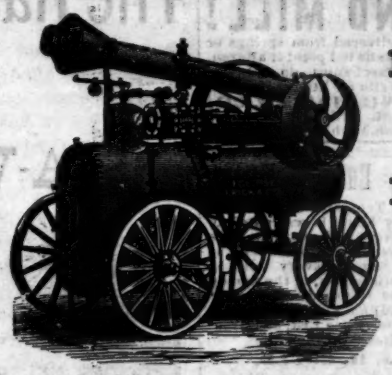

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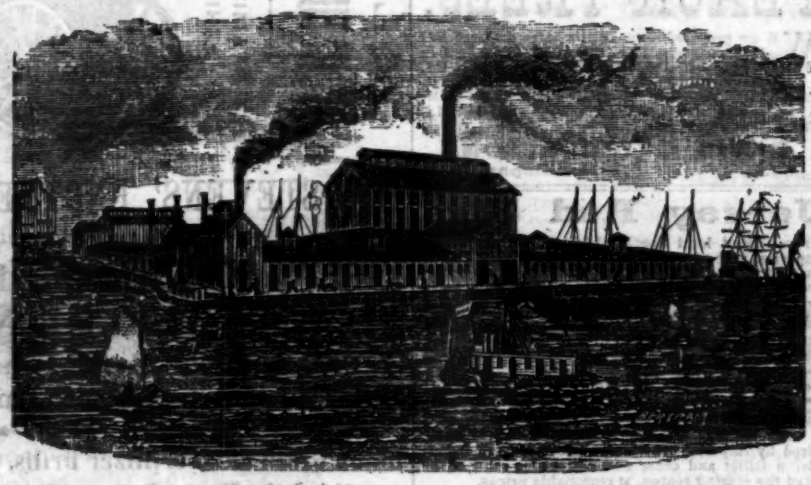

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